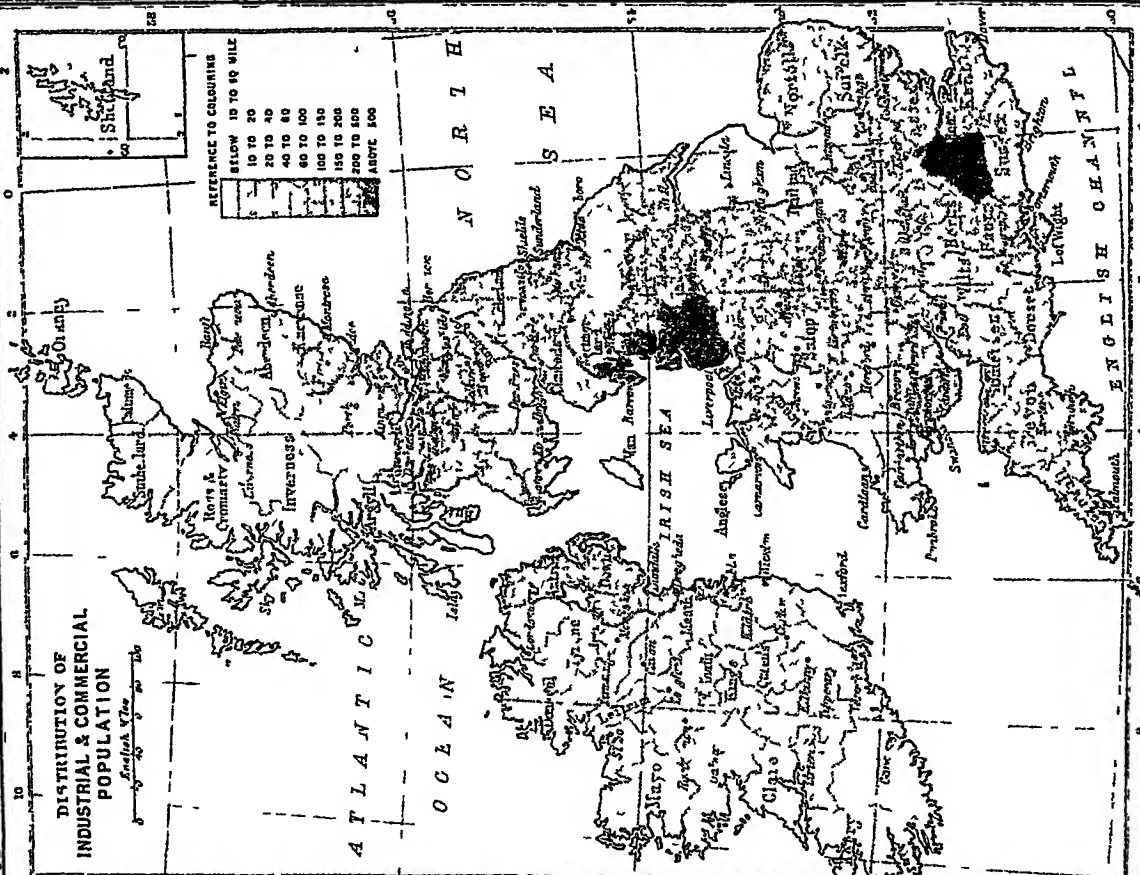


# BRITISH ISLES.



THE  
BUSINESS ENCYCLOPÆDIA  
AND  
LEGAL ADVISER

BY  
W. S. M. KNIGHT  
OF THE INNER TEMPLE, BARRISTER-AT-LAW

VOL. VI  
COMMERCIAL AND GENERAL GAZETTEER  
OF THE WORLD

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## PREFACE

IN these days when the limits of Free Trade are again practically under discussion, and we hear, on every hand, so much of fiscal policy, tariff wars, differential and preferential duties, retaliation, and a British Empire Zollverein, one of the first essentials is a knowledge of facts. If Britain "must wake up," and, shaking off the easy-going ways begotten of early development of mineral resources and of steam communication on land and sea, be to set herself once more to assert her supremacy in the world of industry and commerce, it behoves that any development of a new system should proceed on the sound lines of surely-ascertained realities. In the following pages an attempt is made to present a small portion of information of this necessary kind, the facts given and the places mentioned being chosen from an essentially commercial and practical point of view. The selection has naturally been a matter of great difficulty, both with regard to what was to go in and what was to be kept out; but it is hoped that nothing likely to be required in the broad ordinary course of business has been omitted as far as the limits of space have allowed.

Sizes, physical characteristics, climate, and all the facts and features connected with the different countries, &c., have been dealt with in view of their bearing on industrial and commercial advantages or disadvantages. Places of world-wide fame have not been altogether neglected—a geographical work containing no mention of Jerusalem, Athens, or Rome would, indeed, be somewhat of an anomaly. Literary and historical connections and associations have, however, been almost entirely left out, the space thus gained being devoted to commercial aspects, which often, in works of this size, do not receive any large amount of attention. An effort is thus made to deal with the natural resources and wealth of the different countries, such productions as are valuable from an economic point of view, communications, industries, commerce, distance from Britain, openings for British products, &c. In the case of ports, special attention is given to the peculiarities and state of the place, and to the principal articles of export and import (as far as these can be ascertained), with a view to their bearing on commerce in general, and on that of the United Kingdom in particular. The study of these will, perhaps, show what is required in certain markets, and what can be got there in return; and may, in a number of cases, raise questions whether many things could not be supplied as well and as cheaply by this country as by the countries from which they are now sent—and if not, why not. It will also be seen what our colonies require, what we already send them, and what else we might send them, as well as what we could get from them rather than buy from foreign countries. It will probably be of interest to many to know how often we are ourselves the best customers of some of the countries that are endeavouring to oust us from so many of our markets, and how much manufacturing energy in the shape of coal we sell to some of our most deadly commercial foes—at once aiding them in the present struggle and diminishing our own future resources

Earnest effort has been made to obtain accurate information; but the difficulties that beset the path of the inquirer after truth are here, as in so many other fields, many and great. Some of them are referred to in the article "Great Britain," others occur through vagueness of classification; who can tell what "animal products" may cover? The figures given are recent amounts in round numbers, and are thus, of course, liable to vary a little from year to year, though in other instances (not a very large number) there may be increase or diminution by leaps and bounds. The method, though thus of necessity approximate, seems sufficient for general purposes, and the concrete representation better than the use of such vague expressions as "much," "little," "a great deal," "enormous," &c., which in practice convey no meaning whatever. In dealing with proportions, vulgar fractions and decimals have been used in the same way, as each seemed more convenient, and to have the more definite signification: to most minds, in this country at all events, one-third is probably more suggestive than  $\cdot3$ . Special attention has been given to foreign units of measurement, weights, and money, with their British equivalents, as well as to mercantile flags. Census figures, except for places in the United Kingdom, have been given to the nearest 500, which is sufficient for all practical purposes.

Full use has been made of Consular Reports, which so often contain most valuable information on all points of commercial moment that it is difficult to understand why their stores should be neglected. That they are so is clear. Complaint is often made that much of what they contain is out of date before it is published but it must be remembered that these reports cannot be made up till the information becomes available to the consul concerned. Thereafter there seems usually to be little delay. As to where inattention does come in, the remarks of the British consul at Stettin, in his report issued in May 1903 (Foreign Office Series 2977), are much to the point: "I have now before me four newspaper cuttings dated March 20th, 21th, 25th, and April 4th, 1903, in which an extract from my Report for 1901 is quoted. This report was received at the Foreign Office on April 4th, 1902, and published shortly afterwards. I have also a letter, dated March 25th, 1903, commencing as follows: 'There has just come under our notice a copy of a Report issued by you last year.' It is somewhat remarkable that in these five instances almost a year should have been allowed to elapse previous to notice being taken." Most of the information given in the Foreign Office Series is very much to the purpose, though in some cases improvements could be suggested. In the Colonial Series, on the other hand, not only is improvement possible, but from every commercial point of view it is urgently called for.

W. M.

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# COMMERCIAL GAZETTEER OF THE WORLD

## A

**Aachen.** See Aix-la-Chapelle.

**Aalborg,** seaport on S side of Lum Fjord, Denmark, with ship-building yards Imports coal, salt, artificial manure, grain, petroleum; exports cattle, hides, wool, agricultural and dairy produce. Regular communication from Leith and the Tyne, distance from either about 470 m. Harbour, 22 ft deep British vice-consul. Pop 31,500

**Aalesund,** town, Norway, 68 m W.S.W. of Christiansund; cod fishing Regular communication from Hull, distance about 600 m Pop 12,000

**Aar,** river, rises in canton of Bern, in Switzerland, flows to Rhine, between which and Lake Thun it is practically converted into canals—the Zihl canal up to Lake Bienne, and another from Bienne to Thun.

**Aargau,** canton (540 sq m.) in Switzerland, traversed by the Aar; vineyards, salt, cottons, ribbons, scientific instruments, machinery. Capital, Aarau. Pop of canton, 207,000

**Aarhus,** or **Aarhuus,** seaport on E coast of Jutland. Imports coal, timber, manures, maize, oil-cake, petroleum; exports cattle, bacon, eggs, and agricultural produce. Of the total tonnage 20 per cent and of the foreign tonnage 50 per cent are British. Excellent harbour, 22 to 24 ft deep Regular communication from Leith and the Tyne, distance about 600 m. British consul. Pop 52,000

**Abbeville,** town in the department of Somme, N of France, on R. Somme, 26 m W N W of Amiens Manufactures carpets and other woollen fabrics, hosiery, and velvet; outport, St. Valery sur Somme, communication by canal  $7\frac{1}{2}$  m; open to ships of 9 to 13 ft according to tide. Imports coal, iron, salt, wheat, wood, wool, exports chalk and vegetables Pop 20,500

**Abekuta,** or **Abbeokuta,** town, Upper Guinea, 50 m N. of Lagos; large trade in palm-oil. Pop 100,000.

**Aberavon,** town in Glamorganshire, Wales;

seat of tinplate industry; coal, coke, copper, iron, tinplate Harbour, Port Talbot, depth, 26 to 28½ ft., graving dock, 450 ft. long Imports coal products, copper, silver, lead, tin, iron, steel, timber, exports coal, coke, copper, spelter, iron, steel rails, tin- and black-plates, and fireclay. Copper-smelting Pop 7553

**Aberdare.** See Merthyr Tydfil

**Aberdeen,** city on E coast of Scotland at mouth of R. Dee Important seaport, with regular communication to ports on Moray Firth, N. of Scotland, Orkney (about 150 m) and Shetland Islands (about 210 m), to Leith (85 m), to Tyne (about 150 m), Humber (about 270 m), and London (about 470 m), as well as Bristol, Cardiff, Liverpool, Manchester, Plymouth, Southampton, and Swansea. Industries. ship-building, granite-polishing, fishing—important centre for Scottish trawlers—meat-preserving, woollens, linens, cottons, chemicals, hardware, paper, whisky, and cordage. Imports coal, lime, iron, salt, timber, bones, paper-making materials, and manures; exports cattle, granite, paper, fish, oats, and preserved meats Depth of harbour at high water, 24 to 28 ft.; at low water the depth on the bar is 14 ft Patent slips up to 430 ft, with depth of 21 ft, and graving dock 524 ft, with depth of 20 ft. Pop 153,503

The shire of the same name (1,268,705 acres) has a somewhat barren soil except along the river valleys and coast; drained by Dee, Don, and Deveron. Oats, barley, timber, and cattle-rearing are important. Granite abounds, and is worked wherever there is convenient communication Important fishings off the coast Pop 304,439

**Abo,** seaport, Russia, near entrance to Gulf of Finland, 50 m from sea up R. Aurajoki, and 170 m by rail N.W. of Helsingfors Imports salt, salt-fish, iron, coals, cotton, machinery, agricultural produce and other food stuffs Vessels up to 14 ft.; patent slip to 200 ft. Regular communication from Hull. British vice-consul Pop 35,000

**Abyssinia**, a kingdom in the N.E. of Africa, bounded N.E. by British and French and British Somaliland, which cut it off from the Red Sea and Gulf of Aden. E. and S.E. by Somaliland, S. by British East Africa, and W. by the Soudan. It forms part of the great African plateau, and has an average height of some 5000 ft., falling abruptly towards the Red Sea, and more gradually towards the Nile. The whole surface is cut up by deep gorges (sometimes 4000 ft. deep) with steep, bare, rocky sides, and in the N.W. the Samen mountains, also steep and bare rock, reach a height of 15,000 ft. The drainage is carried off mostly by the Blue Nile and Atbara, and the former takes its rise in Lake Tsana (60 by 50 m.). The lower portions of the country up to 5000 ft. (known as Kolla) have a tropical climate, and produce millet, cotton, sugar-cane, coffee, dates, bananas, and indigo. The district known as the Woina Daga, from 5000 to 8000 ft., has a warm temperate climate, and its vegetation resembles that of southern Europe. This is the chief seat of population, and the pastures support large herds of cattle and flocks of sheep and goats. The higher region, the Daga, has horses and long-woolled sheep. In the rainy season, from April to September (wind off the Indian Ocean), all the higher ground is covered with snow, and in summer the snow-line may be taken at 13,000 ft. Formerly there was no currency except the Maria Theresa dollar and slabs of salt, but the present king (Negus) has introduced a dollar or talari worth about 2s., and other silver coins representing the  $\frac{1}{2}$ ,  $\frac{1}{4}$ , and  $\frac{1}{8}$  of this, while there are copper coins representing the  $\frac{1}{16}$  of a dollar (guercel),  $\frac{1}{32}$  and  $\frac{1}{64}$ . The ounce is the weight of a Maria Theresa dollar (about 430 grs.), a pound of ivory contains 12 oz.; a pound of coffee, 16; a farsela is 480 oz. The kuma (gram) is  $\frac{1}{16}$  bushel, and the dawa 24 bushels. The hand is = 18 ins., and the sajir = 9 ins. There are practically no roads, and goods are mostly carried by mules, horses, donkeys, and camels. A railway is at present being constructed from Jibuti, or Jibuti, in French Somaliland, to Harar (156 m.) the great trade centre of northern Abyssinia. It will direct to some extent to the French port the trade at present carried on by caravan with Zeila and Berbera in British Somaliland, and a project for a branch line to the former place has meanwhile fallen through. It is possible, however, that the readiest outlet for the trade of the W. will be to the Nile valley. Trade also finds its way to Massowah. The official capital, meanwhile at Addis Ababa near the centre of the western part of the country, is changed from time to time as the supplies of firewood in the neighbourhood become exhausted. Abyssinia is rich in minerals, but only a little gold is exported. It goes to India. Other exports are

ivory, coffee, civet, myrrh and other gums, and wax; the chief imports are cottons (American, British, and Indian), woollen fabrics, calico and hardware, Italian and Swedish matches. British consul-general at Addis Ababa. Area probably about 180,000 m. Pop. about 4,000,000; pop. of Addis Ababa, 10,000.

**Acapulco**, a port in Salvador, Central America; harbour with depth of 18 m., but large ships lie in roadstead, and discharge into boats; railway 50 m. to San Salvador, Santa Anna, and San Tecla. Exports to United Kingdom coffee and dye-stuffs; imports cotton and cotton yarn, woollens, iron, and such. British vice-consul.

**Acapulco**, a port on southern Pacific coast of Mexico. Excellent land-locked harbour, but vessels discharge into lighters of about 50 tons. Imports cotton goods, silks, machinery, iron, steel, chemicals, oil, canned goods and spirits; exports rubber, alligator skins, and cotton. British vice-consul. Distance to London or Glasgow, 12,100 m. Pop. 6000.

**Accra**, chief town and port of Gold Coast Colony, Upper Guinea. Anchorage 2 m. off shore. Imports cotton, earthenware, tobacco, spirits; exports, see Gold Coast. Regular communication from Liverpool, Plymouth, and Southampton. Letters, 22 days; parcels, 23. Pop. 16,500.

**Accrington** town in Lancashire, with coal, cotton-weaving, calico printing, Turkey-red dye-works, and chemical manufactures. Pop. 43,005.

**Achin**, or Acheen, N. of Sumatra, difficult of access by sea as river mouths do not admit large vessels. Anchorages at Oleh-leh and Salang Bay (where a dock is being constructed). Gold, copper, precious stones, sulphur, benzoin, benzoic acid, camphor, pepper. Distance to London, 7700 m.; Glasgow, 7740 m.

**Acra**, a port on Syrian coast of Asia Minor; harbour, 20 ft.; accommodation to be improved in connection with the Haifa-Damascus railway: exports wool, cotton, grain, cottonseed, sesame and olive-oil. Pop. 12,000.

**Adalia**, port, S. coast of Asia Minor. Harbour admits only very small vessels, but good roadstead. Imports general manufactures, colonial goods, metals, petroleum, rice, coffee, sugar, wines and spirits; exports wheat and flour, amber, charcoal, cattle, sheep, goats, and hides: silk once important, is again reviving. Most of commerce with Smyrna, the Archipelago, Egypt, and Syria, very little being carried direct with European countries. British vice-consul. Pop. 27,000.

**Adana**, chief town of vilayet of the same name, connected by rail with seaport Mersina, 24 hours distant. When the Anatolian railway is extended from Konia to the Persian Gulf it will pass through this vilayet, and Adana will become an important commercial

centre, and Mersina an important Mediterranean terminus for the line. British merchants and shipping lines would do well to be ready by establishing connections beforehand. Adana, besides this rail and sea connection, has good roads leading in all directions into the interior of Asia Minor. There are chrome ore mines, but the extraction of only a limited quantity of ore is permitted, and there is cotton-growing and spinning, but the quality of the cotton is poor. It might be greatly improved by proper irrigation. British goods are desired, but it should be possible to purchase them without the unnecessary profit of the Constantinople, Smyrna, or Beyrout middleman, indeed, British trade might be doubled or trebled if merchants would only push their goods with vigour, through a central agency at Constantinople, or directly by commercial travellers who understood the Levant and its languages. There is a demand for sewing-machines, agricultural implements (especially harvesters, light and cheap, yet strong and durable), machinery for cotton factories, mills, &c, cheap bicycles, light, cheap, and strong carriages, harness, saddles and bridles—everything as cheap and showy as possible. Openings for British capital might also be found in the establishment of a bank or syndicate to advance money on goods shipped in British bottoms for the United Kingdom; in developing orange and lemon culture, and grape growing for raisins, there being no rain here in the drying season, in establishing a trade in walnut, cedar, and other woods which abound, in growing fruits and vegetables for canning, in grafting the wild olive trees which grow everywhere on the foothills, with good ships from Crete or Cyprus, in developing mulberry growing, in improving the cultivation of sugar-cane, beet, and cotton, and in establishing sugar, cotton, and flour mills. In all goods favourite local patterns should be studied and followed, the smallest order executed (it may lead to a whole line), the goods carefully adapted to the demand, and efforts made to meet idiosyncrasies and prejudices—the merest trifle of colour, detail, or price may make all the difference. Weights and measures quoted should be those of the district, and the price that of the goods delivered at the nearest port. Advertisements of French merchants are printed in Arabic, Turkish, modern Greek, and Armenian.—British dealers should follow the same plan. Owing to the moral standpoint of the Turk, and the state of the law, the recovery of debts is impossible except of consent, and direct agents would be able to establish a cash trade. British vice-consul. Area of vilayet, 14,359 m. Pop about 405,000, pop of town about 45,000.

Addiewell, village, Midlothian, Scotland,

9 m. S of Lamlithgow, 28 m by rail E. of Glasgow, paraffin works. Pop. 1591.

**Adelaide and Port Adelaide.**—Adelaide, the capital of South Australia, stands on the E side of the Gulf of St Vincent, from which it is distant 5 m. in a direct line. Situated on a coastal plain it is sheltered on the E. and S by the Mount Lofty range of hills from 4 to 8 m distant, and is divided by the Torrens R into North Adelaide and South Adelaide. The latter is the business part of the city. Adelaide is in direct railway communication with Melbourne, Sydney, and Brisbane. To the first the distance is 506 m, the time taken being 18½ hours. Adelaide is the terminus of the direct telegraph line across the continent to Port Darwin, and thence by Java, &c., to London, and it is also the southern terminus of a line of railway running inland 688 m to Oodnadatta, which it is hoped will by and by be extended across the continent also. Time for 12 noon at Greenwich 9 14 P M. Letters, 31 days, parcels, 37. Pop 38,000, and including suburbs about 163,000. **PORT ADELAIDE**, the harbour, is 7½ m. to the N.W., on an inlet of St Vincent Gulf, about 8 m from the mouth of the Torrens River. There is a depth of from 21 to 28 ft at low water (high water about 8 ft more), so that any ordinary ship can lie afloat, the ocean steamers having special wharves provided for them. There are graving docks and patent slips up to 720 ft. There is extensive wool storage accommodation, and also cold storage chambers and freezing works. Industries silver- and copper-smelting, sawing timber, sugar-refining, rope-making, flour-grinding, and salt-making. Exports wool, wheat, bark, gums, hides, tallow, copper and lead ore, butter, cheese, gold, wine, and fruit. Regular communication with London, Liverpool, Southampton, Bristol, and Manchester, as well as with other Australian ports. Distance from London by Suez Canal direct about 10,800 m (time about 30 days), by Colombo about 11,500, by Cape of Good Hope about 12,000. Distance by sea from Freemantle, 1370 m; from Albany, 1020 m, from Melbourne, 504 m; from Brisbane, 1463 m, from Bluff, at S end of New Zealand, about 1700 m. Pop of district, 21,000.

**Aden**, a British dependency, on a rocky volcanic promontory in S of Arabia, on Gulf of the same name, 110 m E of the Straits of Bab-el-Mandeb at the entrance to the Red Sea. Area about 75 sq m. As a very important coaling station it is strongly fortified, and it is also an important commercial centre, for trans-shipment between Europe, Asia, and Africa, for trade between Arabia and the N of Africa, and for export of the productions of the interior of Arabia. Every year about 1500 ships visit the harbour, of which the outer

portion has a depth of 19 to 28 ft Imports cotton yarn and piece goods, grain, coal, hides and skins, and tobacco, exports coffee, gums, dyes, spices, ostrich feathers, ivory, pearls The dependency is under the Government of Bombay The town is in the crater of an extinct volcano Regular communication from London, Liverpool, Southampton, distance from London, 4610 m, from Bombay, 1664 m, from Karachi, 1480 m, from Colombo, 2100 m, from Albany, Australia, 5150 m Time for 12 noon at Greenwich, 3 P M Telegrams 3s a word. Letters, 10 days, parcels, 18 Pop 41,500

**Adige**, a river of the Tyrol and Italy, entering the sea to the N of the mouth of the Po It has a swift current, but is navigable, though with difficulty, as far as Bozen, 33 m above Trent. It is connected with the Po near the mouth by a navigable channel called the Adigetto

**Adirondack Mountains**, in central and north-eastern New York, highest point Mount Marcy (5403 ft) Wild and beautiful Fine timber, especially white pine, and in places iron ore

**Adis Abbeba**. See Abyssinia

**Adour**, river in S W France, from Pyrenees to Bay of Biscay, navigable for 80 m up to St Sever

**Adowa**, or **Adua**, old capital of Tigre in N Abyssinia, former trade centre communicating with Massowah in Eritrea, but has lost its importance Pop 3000

**Adra**, seaport on S. coast of Spain, about 30 m. W of Almeria Bad anchorage Imports coal and coke, exports lead, lead ore, iron, sugar, and grapes British consular agent Pop 12,000

**Adrianople**, the third city of European Turkey, 198 m by rail, W N W of Constantinople, on the Maritza R, which is navigable from this point to the Aegean Sea Connected by rail (93 m) with roadstead of Dede Agatch near mouth of river There is considerable silk-weaving, the place being a great centre for raw silk, and also trade in opium, otto of roses, and wine Pop about 81,000

**Adriatic Sea**, the arm of the Mediterranean which passes N W between Italy and the Balkan Peninsula, communicating with the Ionian Sea by the Strait of Otranto Its length is about 500 m, and its greatest breadth about 130 The outer part has a depth of over 800 fathoms, but the mean depth is a little over 100 fathoms, and towards the N, where a large amount of silt is brought down by the Po and the Adige, it shoals to 20 fathoms The water is very salt, owing perhaps to the small amount of river water received and the great evaporation. The west coast is mostly low and unbroken, but the east side is rocky with numerous islands and inlets In the N.

are the Gulfs of Venice, Trieste, and Quarnero, and in the S W that of Manfredonia The chief ports, to all of which there is regular communication from London, Liverpool, and Glasgow, are Venice, Trieste, Ancona, Bari, and Brindisi

**Aegades**, a group of Italian islands in the Mediterranean, 15 to 30 m W. of Sicily, of which the chief are Favignana, Levanzo, and Marittimo

**Aegean Sea**, the part of the Mediterranean lying between Greece, Turkey, and Asia Minor, known also as the Archipelago It contains a very large number of small islands, is about 300 m. long and about 180 wide, and has, in the outer part, a depth of over 600 fathoms, shoaling round the coasts, and about many of the islands, to less than 100 fathoms On the W is the Gulf of Volo, in the N the Gulfs of Salonika, Cassandra, Monte Santo, Orfania, and Saros, and on the E a number of openings of which the most important is the Gulf of Smyrna. The chief ports are Syra, Volo, Salonika, Dede Agatch, and Smyrna

**Aetolia** and **Acarmania**, a province of northern Greece, between the Gulf of Patras and the Turkish frontier The district had prior to about 1877 a trade in cereals, olive-oil, wool, and hides, but about the time mentioned, owing to the destruction of French vineyards by phylloxera, and the consequent demand for wine and dried currants and raisins, large tracts of land were converted, as rapidly as possible, into currant and grape vineyards, no attention being paid to the warnings about dependence on a single crop, and that one liable to many and serious risks The demand lasted for ten years or so, and the new industry prospered, but when the French vineyards recovered, and prohibitive duties were imposed on currants and Greek wines, there was a serious crisis, and this was rendered still more severe by an outbreak of peronosporos among the vines Valonea (the cup of the acorn of a species of oak) which is used for tanning, and olives are also produced, as well as tobacco, of which, however, none comes to Britain Trade with the United Kingdom is mostly carried on through Patras, and British goods are preferred—Manchester goods and woollen fabrics, hard-ware, pottery, cutlery, coal, Labrador cod-fish, and salmon The vine disease has created a demand for sulphate of copper for vine spraying, and any preparation effective for the same purpose would have a market, but only after experiments had proved its value A decrease in the tonnage of British shipping in recent years is due to the fact that the larger British colonies, instead of importing through the United Kingdom as they used to do, are taking cargoes direct British consul at Patras Area, 3013 sq m. Pop 171,000

**Afghanistan**, a country of central Asia,

with Persia on the W., R. A. and Russian Turkey on the N., the tribes under British influence and India at the S., and the British Protected Areas of Baluchistan and the district of Quetta under the government of India on the S. They had formerly with Persia war ended in 1857, with R. A. by a Russo-Persian convention in 1857, and with India in 1842. The country is under British influence, and has at different times cost a good deal of trouble. In 1842 a British Indian army of 16,000 men were massacred on the way from Kabul to the Khair Pass, only one officer escaping to tell the tale; in 1879 the British resided at Kabul and have not since been there, only murdered; and in 1879-81 General (now Earl) Roberts occupied the country in the operations, in which the famous march from Kabul to Kandahar formed such a brilliant feature. The government is despotic, the ruler having the title of Amir.

Afghanistan is "a drab coloured land, one of the waste places of the world. Sand, bare rock, stony hills, and vast snow-topped mountain ranges, are the main features of the stern inhospitable country; tender green places, fertile irrigated fields, vineyards and orchards, being circumscribed and infrequent." Its extreme length from E. to W., from Herat to the Khair Pass, is about 600 m., and the width from N. to S. about 500, while the area is about 230,000 m. The country extends over 30° to 35½° N., and from 60° to 74½° E. The surface is very rugged, the greater part of it being covered with alluvium from the Hindu Kush (and its western continuations the Koh-i Baba, the Safid Koh, and the Sir-i Koh) and the Sulaiman Mountains. The plateaus between vary from 1000 to 7000 ft., and even the lowest parts in the S.W. and W. are over 1000 ft. Temperature depends entirely on elevation, and the climate in the higher districts is very hot in summer and very severe in winter, but in the lower districts it is almost always pleasant. The N. is drained by the Oxus and its tributaries, the N.W. by the upper waters of the Murghab and the Hari-Rud, the S. and S.W. by the Helmand and Argandab, and the S.E. by the Kabul, the Kuram, and the Gurnal rivers, the first flowing through the Khair Pass, and the others through the passes of the same name. The rainfall is slight, and cultivation accordingly dependent on irrigation; but many of the valleys are extremely fertile, and produce large crops of grain, cotton, grapes, apricots, apples, quinces, pears, plums, peaches, pomegranates, and figs. Mulberry is also grown. There are two harvests every year, wheat, barley, and lentils being sown in the end of autumn and reaped in summer, and rice, millet, maize, tobacco, and beet sown in spring and reaped in autumn. There is also abundance of the castor-oil plant, of madder,

and of gum-producing plants, including acacia, tragacanth, ammoniacum, and galls. Copper, iron, lead, antimony, sulphur, silver, small quantities of gold, coal, and lapis lazuli, are said to be found in the N. and S.W., but the mineral resources, such as they are, await development, which meanwhile had government, and the greedy and rapacious character of the people, render impossible. The chief industries are the manufacture of silk, woollen cloth, carpets and felt, paper (i.e. sheep-skins rendered by means of treatment with pomgranate rind, &c., particularly red and lilac for making into robes), and fabrics of camel and goat hair. The exports are silk, carpets, madder, gums, skins, cattle, grain and peas, peach fruits (especially dried fruit), spices, and tobacco. Imports cotton fabrics, indigo and other dyes, sugar, and tea, all from India, arms, turquoises, and rugs, &c., from Persia, silk, and gold and silver wire, from Russian Turkestan. There is also a large transit trade from Mehel in Persia to Herat, from Merv in Turkestan to Herat, from Turkestan by Chitral to Jalalabad, from India by the Khair Pass to Kabul; by the Gurnal Pass to Ghazni, and by the Bolan and Sind-Pishin Railway to Kandahar. Russia discourages traffic from India to Turkestan by heavy duties. Transport is by camels and horses, there being no wheeled conveyances, and, indeed, no roads fit for them except those made by the British for military purposes, viz. the Khair Pass to Kabul, and the Bolan to Kandahar. There is a short railway at Kabul. None of the rivers are navigable though they are used for floating timber down stream. The coinage is nominally a gold piece equal to a sovereign, silver pieces equal to the crown, half crown, rupee, half-rupee (dram), and threepence, and bronze pieces equal to about 5d and to 1d. Pop. about 1,000,000, of whom about 3,000,000 are Afghans proper or Pathans.

Afion Karahissar, a town in Asia Minor, about 180 m. E. of Smyrna, 3000 ft. above sea-level, centre of an opium-producing district. Pop. 25,000.

Africa, the most southerly, and second in size, of the continents of the old world, extends from 37° 21' N. to 34° 51' S., and from 51° 27' E. to 17° 33' W. It thus covers an extreme distance from N. to S. of some 5000 m., and from E. to W. of some 4500, but owing to the sudden contraction of the land at the Gulf of Guinea, and to the taper to the S., the area is much less than these measurements suggest, being probably about 11,300,000 m. The continent approaches Europe at the N.W. corner, where the Strait of Gibraltar is only about 8½ m. across, and it is joined to Asia at the N.E. corner by the Isthmus of Suez, where, of course, the Suez Canal is physically but a mere scratch

across Off the S E coast is the large island of Madagascar, and off the N W coast the small group of the Canaries The coast line, which has a length of about 16,000 m, is singularly unbroken, and the few inlets there are—such as the Gulfs of Cabes and Sidra on the N, and the Gulf of Guinea with the Bights of Benin and Biafra on the W, are wide-mouthed and shallow From the coast there is a very rapid rise, and from a more or less continuous outer rim of mountains the greater part of the surface spreads inward in two tablelands, of which the southern has a mean elevation of over 3500 ft, and slopes down to the northern, which has a mean height of about 1300 ft. In some parts the latter falls still lower, a portion of the north-eastern Sahara being below sea level The higher plateau is traversed by a number of ridges of some elevation, and in the equatorial region are a number of craters of extinct volcanoes, of which the chief are Kilima'njaro (20,000 ft) and Mount Kenia (18,500) The chief mountain ranges near the coast are the Atlas on the N and the Drakensberg in the S E Along the eastern part of the plateau are a number of large lakes, Lake Rudolf, Albert Nyanza, Albert Edward Nyanza, Victoria Nyanza, Tanganyika, Mocrö, Bangweolo, and Nyassa

The N E is drained by the Nile and its tributaries and the S E by the Zambesi, Shiré, Limpopo, and a number of smaller rivers, while along the W coast the principal rivers are the Senegal, the Gambia, the Volta, the Niger and Benue, the Ogowe, the Congo, the Kwanza, the Kunene, and the Orange and Vaal rivers The Nile, Niger and Benue, Congo, Zambesi, and Orange and Vaal rivers are important highways into the interior, though their navigation is interrupted by falls and rapids, but the others flow mostly only down the coastal slopes.

The warmth of the air over the greater part of the area, and the dryness of the winds in the interior (owing to their losing the greater part of their moisture when they come in contact with the coast hills), have the effect of making the rainfall very small, except along the equatorial regions and some narrow strips of coast One result is the great Sahara desert in the N, and the Kalahari desert in Bechuanaland in the S The natural productions and trade are dealt with in connection with the various territorial divisions

The continent has been practically divided (on paper at least) among Britain, France, Germany, Italy, Portugal, Spain, and Turkey We possess Basutoland, Bechuanaland, Cape Colony, Central African Protectorate, East Africa, Gambia, Gold Coast, Lagos, Natal, Nigeria, Orange River Colony, Rhodesia, Sierra Leone, Somaliland, Transvaal, Uganda, Walvis Bay, and Zanzibar, &c, and have

in our sphere of influence Egypt and the Egyptian Soudan, a total area of about 4,000,000 m France has Algeria, Dahomey, French Congo, French Guinea, French Somaliland, the Ivory Coast, the Sahara district, Senegal, Tunis, and Madagascar, about 3,805,000 m. Germany has German East Africa, German South-West Africa, Kamerun, and Togoland (Upper Guinea), about 933,400 m Italy has Erythrea and Italian Somaliland, about 188,500 m. Portugal has Angola, Portuguese East Africa, and Guinea, about 790,000 m Spain has Rio de Oro and Muni River Settlement, about 169,000 m Turkey has Tripoli and Fezzan, about 399,000 m Abyssinia, with 320,000 m, Congo Free State (Belgian), with 900,000 sq. m, Liberia with 52,000 m, and Morocco with 219,000 m, may be taken as independent states The French territories are nearly all united, and Britain has nearly also a united line from Egypt to Cape Colony, through which a telegraph line from N to S is now being constructed, while a railway following the same course is projected Estimated population about 164,000,000

Afvestad, a village in Sweden, 37 m S S E of Ählun, with iron and copper smelting

Agen, chief town of department of Lot and Garonne, S France, on Garonne, and 73 m by rail S E of Bordeaux; trade in fruit (grapes, plums, peaches, and apricots), drugs, and chemical manures, market might be pushed in these connections, and in tin-plate and agricultural implements Pop 22,500

Agger Canal, or Aggerminde, a water connection between the Lum Fjord in Denmark and the North Sea, formed during a storm in 1825

Aggershuus, or Akershus, a province of Norway round Christiania, most important part of the country for agriculture, mining, and commerce Area 2055 m Pop 116,500

Agra, city of N W Provinces of British India, on right bank of Jumna, on Agra canal (irrigation and trade) between Delhi, Agra, and Muttra By rail 110 m S S E of Delhi. Famous for mosaic work Pop 188,000

Agram, city of Austria-Hungary, capital of Croatia and Slavonia, about 75 m by rail E of Laibach, and 100 E N E of Fiume, has manufactures of silk and porcelain, and in the neighbourhood are the hot sulphur baths of Stubitz and the copper works of Rude Pop 61,000

Agua Calientes, S E centre of Mexico, warm springs and lithographic stone.

Aguilas, port in S Spain, about 40 m W. of Cartagena, branch railway from Lorca Good harbour vessels up to 4000 tons, depth 45 ft at El Hornillo close by, where 35 ton waggons will tip ore into ship's hold Imports coal and machinery, mostly from United Kingdom; exports esparto, iron ore, and silk-

worm gut to United Kingdom, and zinc ore to Belgium, grain and fruit locally. British vice-consul. Pop 15,000

**Agulhas**, a cape (455 ft) with a lighthouse, most southerly point of Africa, about 100 m E S E of Cape of Good Hope, off it Agulhas Bank.

**Ahmedabad**, a city and district of India, on Sabarmati R, 310 m by rail N of Bombay, manufactures silk brocaded with gold thread, and cotton fabrics, pottery, paper, tin-ware and electro-plate. Area of district, 3949 m. Pop of district, 900,000, of city, 186,000

**Ahmednagar**, or **Almednugger**, a city and district of India, 160 m by rail E of Bombay, manufactures carpets, and copper and brass pots. Area of district, 6645 m. Pop of district, 800,000, of city, 12,000

**Ahrweiler**, a town of Prussia, on Ahr, 23 m by rail S of Bonn, iron ore and wine, and near it the springs which yield Apollinaris. Pop 5500

**Ain**, department of E France, along river of same name, on Swiss border. Cheese from high ground, iron ore and lithographic stone at Villebois, and asphalt at Seyssel. Area, 2239 m. Pop 350,500

**Ain**, river from Jura to the Rhone, 18 m above Lyons. Of 118 m the last 80 navigable down but not up, timber floated from Jura

**Aintab**, district N of Aleppo. Vines, hides, leather

**Airdrie**, town in N E Lanarkshire, Scotland, 10 m by rail E of Glasgow, centre of iron and coal district, weaving, paper-making, engineering works, fireclay. Pop 22,288

**Aire**, river of Yorkshire, England, rising near Settle, disappearing for two miles underground and then reappearing, flows by Leeds and Knottingley to the Ouse, 5 m N W of Goole. It is navigable to Knottingley, and thence is canalised to Castleford, where a junction is formed with the Leeds and Liverpool Canal. Other canals branch off and give communication with Selby, Goole, Wakefield, Sowerby Bridge (where there is a junction with the Rochdale and Manchester Canal), Barnsley, Dewsbury, and Halifax. These form the Aire and Calder navigation, and give passage to boats drawing 7½ ft, except between Wakefield and Barnsley, where the depth admits only of vessels drawing 6 ft

**Aisne**, a department along the middle portion of river of same name. Timber, agriculture, textiles (St. Quentin), and plate glass (St. Gobain). Area 2839 m. Pop 536,000

**Aisne**, a river of N France, tributary of the Oise. Of 280 m, 75 below Château-Porcien are navigable, while 100 more are used for floating timber, feeds a lateral canal from Vouziers to Condé, near Soissons, where another canal gives a connection with the Meuse. Still another leads to the Marne

**Aix**, a city of S. France, 17 m. by rail N of Marseilles. Cotton-thread, silk, and olive oil. Hot saline springs. Pop 29,500

**Aix-la-Chapelle**, or **Aachen**, a frontier city of Rhenish Prussia, 43½ m by rail W N W of Cologne on Brussels line. Coal at Worm to N and Inde to S, manufactures iron, steel, and woollen fabrics. Famed for bells and needles. Cold chalybeate springs and hot sulphur springs, the latter with temperature of 111° to 140° Fahr. Distance by rail from London, 840 m. Letters, 12 hours, parcels, 15 Pop 135,500

**Ajaccio**, port and chief town of Corsica, on W. coast. Good harbour, 18 to 22 ft. Imports tobacco, food stuffs, spirits and beer, exports wood, charcoal, wine, fruit, coral, sardines. Trade almost entirely with France. British consul. Pop 22,000

**Akassa**, mercantile coaling station at mouth of Niger, and port of transfer from ocean to river steamers, anchorage 3 m out. Imports provisions, spirits, cottons, hardware, cutlery, chief exports, palm kernels and palm-oil

**Akershus**. See Aggershuus

**Akmolinsk**, a province of Russian Central Asia, on Kirghiz Steppe, climate of extremes, agriculture in valleys, rearing of horses, cattle, sheep, and camels, mining of gold and coal, trade in salt, tallow, wool, hides, and sheepskins. Transport trade between Kiva and Petropaulovsk. Area, 229,609 m. Pop 679,000

**Akron**, a town of Ohio, United States, 246 m by rail N E of Cincinnati, on Erie and Ohio canal, 31 m S E of Cleveland, coal, agricultural machinery, hardware. Pop 43,000

**Akyah**, seaport and district, Burma, town on E side of Island of Akyab, excellent harbour, large export trade in rice, cotton, &c. Regular communication from London and Liverpool. Distance from London, 7950 m, Liverpool, 7875, Glasgow, 7985. Pop of town, 36,000, of district about 360,000

**Alabama**, a state in the S of the United States. Florida cuts off the greater part of the S side from the sea, but there are about 60 m of coast. The N E is occupied by outliers of the Appalachian system, but elsewhere the surface is flat and no great height above sea-level. The drainage is carried off by the Alabama, Mobile, and Tennessee Rs, of which the Mobile-Alabama is usually navigable for over 300 m for vessels of 6 ft draught. In the N E there are very rich deposits of coal, iron, and limestone, which have made Alabama one of the great pig-iron producing districts of America (pig-iron over £4,000,000, coal and coke, £3,000,000). There are also valuable cotton crops on the rich black soil of the greater part of the southern half of the state, and the pine forests of the S, and the cypress timber of the river swamps, are valuable. Besides the ordinary grain, &c., crops, there are rice, sugar-

cane, and tobacco. Area, 52,250 m. Pop 1,829,000

**Alagoas**, a town and coast province of Brazil, S of Pernambuco, at mouth of river San Francisco, exports sugar, cotton, hides, dye-woods, and rosewood. Area of province, 22,580 m. Pop 511,500, pop of town, which is often known as Villa da Magdalena, 6000

**Alais**, a town of Gard, S France, 30 m by rail N W of Nîmes, coal, iron, zinc, lead, and copper ores, glass and earthenware. Pop 25,000

**Alaska**, a peninsula in N.W. of North America, sold to United States by Russia in 1867 for about £1,500,000. It is traversed by the river Yukon, some 2000 m long, and discharging a volume of water said to be greater than that of the Mississippi. The N is barren tundra, and the climate is everywhere damp and very severe. The products are fur (sea-otter, seal, beaver, black and brown bear, fox, marten, mink, and musk-rat), fish, and minerals. The fishing for cod, halibut, and herring is off the southern portion of the coast, and on Kodiak Island there are great salmon canneries. The capture of whales and walrus is less important. The chief minerals are gold and lignite (the former both dust and from quartz), and there are probably also deposits of economic value of silver, copper, lead, zinc, petroleum, and tin. Export of ice to the western coast of United States. The chief settlement is at Sitka, on Baranov Island off the southern part of the W coast, salmon fishing and curing. Area about 531,000 m. Pop 64,000

**Albania**, a vaguely defined district of mountains and long upland valleys lying along the W coast of European Turkey. With a good soil and delightful climate it might produce excellent grain crops and abundance of grapes, olives, mulberry trees, and fruit in general, and even of cotton and indigo, but the anarchy and disorder constantly prevailing among the half-civilised mountaineers, and the resulting insecurity of life and property, render the development of the country impossible.

**Albany**, capital of New York state, on R. Hudson, 140 m N of New York. It is an important trade centre, with good communication by rail with the central lakes by the Erie Canal, and with Lake Champlain by the Champlain Canal, iron and other manufactures. Pop 94,200

**Albany**, town on King George's Sound, S W of Western Australia, on N shore of Princess Royal Harbour, 254 m by road and 352 m by rail S S W of Perth. The harbour is almost the finest in Australia, 4½ m long and 3 m wide, with a uniform depth over anchorage of 34 ft. at low water, and a depth of 25 ft. at the jetty. Imports general merchandise, exports wool, timber, gold, pearl-shell, and skins and hides. Regular communication with London

and Liverpool. Distance from Colombo, 3370 m, from Adelaide, 1010. Pop. 3650

**Alberta**, a Territory of N.W. Canada, 430 by 250 m, sloping eastward from watershed line of Rocky Mountains, drained by the Athabasca and the Saskatchewan and their tributaries. Elevation, 2000 ft. to 3500 ft (at base of Rocky Mountains). Climate temperate in summer, cold in winter—modified by S.W. winds. Cattle ranching (centre Calgary), dairy farming, grain, and forests (N and N.W.). Large coal and anthracite fields along skirts of Rocky Mountains; centre of former at Lethbridge, and of latter at Banff, where are also hot sulphur springs; alluvial gold. Canadian Pacific Railway passes through the south by Calgary and Banff, and a branch by Lethbridge, Macleod, and Crow's Nest. Area, 106,100 m. Pop 66,000

**Albert Edward Nyanza**, lake, Nile basin, in Central Africa; on equator, 3300 ft above sea-level, in all about 80 m long by 25 wide; sends surplus water to Albert Nyanza

**Albert Nyanza**, lake, Nile Basin (source of White Nile), in Central Africa, 2500 ft. above sea-level, 110 m. long by 25 wide at widest part

**Alberton**. See Cascumpeque

**Alberton**, tin mining district in Dorset, N.E. Tasmania, 70 m N.E. of Launceston

**Albion Mines**, coal mines in Pictou, Nova Scotia, 6 m by rail from Pictou harbour

**Alcaraz**, a small town in S.E. Spain, about 190 m S of Madrid, zinc mines

**Alcazar de San Juan**, a town in S.E. Spain, 92 m. by rail S.E. of Madrid, zinc and iron ore. Pop 10,000

**Alderney**, French Aurigny, one of Channel Islands, separated from Cape La Hague by the Race of Alderney with very rapid tidal current. The island is about 4 m long and 1½ wide, and contains 1962 acres. Breakwater nearly a mile long, and harbour of refuge on N coast. Famous for cattle. Regular communication with London, Southampton, Bristol, and Goole. Pop 2062

**Alentejo**, a province of S Portugal, extending from Tagus about 50 m. above Lisbon southward along the Spanish border and the Guadiana for about 150 m. Horses, mules, sheep, wheat, fruit, oil, and in E chestnuts and cork-oaks, copper pyrites in S.E., communications very bad. Area, 9431 m. Pop. 414,000

**Alençon**, a town of N.W. France (Orne), on river Sarthe, 34 m by rail N of Le Mans, and 68 S of Caen, granite, leather, spinning, lace (point d'Alençon), crystals found in neighbourhood are cut into "Alençon diamonds". Pop 17,500

**Aleppo**, a vilayet and town in N of Syria, Asia Minor. The district lies along the upper waters of the Euphrates, and the town is about half-

way between the river and the Mediterranean. Agriculture, which is largely dependent on irrigation, is backward, but efforts are being made to improve it, and a market might be created for agricultural machinery, produces for export barley, wool, silk, cotton, galls, raisins and figs, pistachios, butter, morocco leather and skins, liquorice root, gum, albumen and egg yolk, salted gut, copper, oranges and lemons, and cattle Imports cotton yarn and cloth, jute fabrics, silks, rice, sugar, coffee, hides, paper, metals, hardware, indigo, petroleum, drugs, tobacco, and aniline colours The mines might be greatly developed but the government refuses concessions The trade with the United Kingdom has hitherto been more than 50 per cent of whole, but recent rises in price of cotton stuffs from Manchester (a very important branch) has given an opportunity to the Italian manufacturer, who can sell cheaper and is willing to give three or six months' credit as against the British maker's c o d Natural indigo still holds its place against the artificial German product. The town is concerned in all the industrial products and industries of the district, and is also a centre of exchange for caravans from Diarbekir, Kurdistan, Armenia, Mosul, and Baghdad When the Anatolian railway is extended to the Persian Gulf there will be a branch from Tel Habeshi to Aleppo (40 m) The port is Alexandretta, 60 m distant British consul. Area of vilayet, 30,340 m Pop about 996,000, pop of town, 127,500

Alessandria, a province, and a great fortress and town, of N Italy, 60 m by rail E S E of Turin; silk, linen, and woollen fabrics Area of province, 1950 sq m Pop 812,500, pop of town, 71,500

Aleutian Islands, a chain of some 150 rocky, mountainous, volcanic islands stretching 1650 m westward from the long western finger of Alaska Peninsula to the S of Behring Sea. They belong to the United States, and are peopled by Aleuts, a race akin to the Eskimo The islands are grassy but treeless, and the climate is damp though it never runs to extremes Visited by fur traders for seals, sea-otters, and Arctic foxes

Alexandretta, the port of Aleppo, the only safe anchorage on the Syrian coast, but, situated in a marshy country, it is not very healthy The depth at entrance is 7 fathoms, and loading and unloading is done by lighters Imports cloth and manufactured goods, silk and silk goods, sugar, leather and hides, paper and stationery, iron, lead, zinc, hardware, indigo, petroleum, drugs, tobacco, and colours, exports native cotton and silk, soap, butter, gold and silver work, wool, galls, grain, pistachios, morocco leather, liquorice, copper ore, and cattle Of a total import of nearly £2,000,000, Britain sends nearly half, of an

export of over £1,000,000, it takes one-tenth. Of a total trade of 400,000 tons nearly one-fourth was British Regular communication with London, Manchester, Liverpool. British vice-consul. Pop 10,000.

Alexandria, the principal commercial centre and port of Egypt, 112 m N.W of Cairo, with which there is communication by rail, by canal, and by the Nile The city is built on a narrow peninsula between the Mediterranean and Lake Mareotis, and on the isthmus joining the old island of Pharos to the mainland There is a large and excellent harbour with depth of from 22 to 26 ft at the quays A floating dock, 463 ft. long, takes vessels of 18½ ft draught and up to about 2000 tons, but a graving dock 520 ft long to take vessels up to 23 ft. is being constructed The import and export trade is practically that of Egypt, only about one-fourteenth of the whole not passing through this port, and for the various articles, as well as suggestions for markets, reference may be made to the account of the whole country Time for 12 noon at Greenwich, 159 PM Regular communication from London, Liverpool, Manchester, Hull, and the Tyne Distance from London, 3100 m; Liverpool, 3030, Tyne, 3385, Glasgow, 3140; Cardiff, 2922 British consul Letters, 5½ days, parcels, 9 to 15 Pop 320,000

Alexandria, a town in Dumbartonshire, Scotland, on right bank of river Leven, 19 m by rail W of Glasgow, calico printing and dye-works Pop 8007

Alexandrovsckaya Manufactura, village close to St Petersburg, Russia, cotton, flax, glass and china works, and manufacture of playing cards Pop 10,000

Alfreton, a town in Derbyshire, England, near Matlock, coal, iron-smelting, and earthenware Pop 17,505

Algarve, province in extreme S of Portugal, figs, almonds, oranges, and carobs, bay salt, important fisheries. Area, 1873 m Pop 255,000

Algeciras, a port in S Spain, 6 m W of Gibraltar, fortified, imports coal, exports stone and cork British vice-consul Pop 12,000

Algeria, the northern portion of the French possessions in Africa, extending some 550 m along the southern coast of the Mediterranean There is a northern mountainous region called the Tell, cultivated and with very fertile valleys, a central plateau with an elevation of 1800 to 2800 ft, and a northern desert region interspersed with rich oases where date-palms, olives, and figs thrive In the last district there seems to be a considerable supply of underground water, and artificial oases are being created by irrigation from artesian wells There are over 2000 m of railway, with a main line from east to west, and branches

**inland** The chief mineral products are iron and zinc ore, salt, and phosphate of lime, of the first and last of which considerable quantities are sent to the United Kingdom, which also takes a considerable amount of esparto and other paper-making grasses (growing in abundance in the plateau region), grain, hay, cork, and skins, fruits and early potatoes, as well as other vegetables, are grown for export to Britain, France, and Germany, and other important products are wheat, barley, silk, tobacco, wine, olives, colza, and wool. Leather dressing is also carried on. Three-fourths of the trade is with France, Great Britain coming next with about one-fiftieth. The country takes from us chiefly cotton goods, coal, and machinery. Telegrams, 2<sup>d</sup> d a word. Area, 184,474 m. Pop 4,739,500.

**Algiers**, a seaport, and the chief town of the district just described, near the centre of the coast, on the W side of the Bay of the same name. There is a good harbour with a depth of from 7 to 9 fathoms, two dry docks (one 455 ft long with 27 ft of water at entrance, and the other 268 ft long with 18 ft at entrance), and a depth of 18 to 21 ft of water at the quays. Regular communication from London and Liverpool. Distance from Marseilles, 402 m., Liverpool, 1665, London, 1740, Glasgow, 1775. British consul-general. Letters, 2½ days, parcels, 4. Pop 97,000.

**Algou Bay** See Port Elizabeth

**Algoma**, a large county embracing the whole of the western part of Ontario to the N of Lake Huron and Lake Superior. The district is exceedingly rich in minerals—iron ore about Sault St. Marie and Port Arthur, nickel, platinum, and copper, about Sudbury, gold at Michipicoton on Lake Superior. Area, 43,000 m. Pop 50,000.

**Alicante**, a province and a port in S E Spain. The latter, 40 m by rail N E of Murcia, has a good harbour, taking vessels up to 19 ft. Imports coal, iron goods, grain, manures, fish, tobacco, petroleum, timber, jute, exports wine, lead, esparto, liquorice, saffron, aniseed, fruit, wine-lees, oil, and red pepper. British trade in fish hampered by the bounties of French government to French fisheries. Regular communication from London, distance, 1640 m. British vice-consul. Area of province, 2098 sq m. Pop 451,600, pop of town, 49,500.

**Aliwal North**, a town in Cape Colony, on the Orange River, at the border of the Orange River Colony, 282 m. by rail N N E of East London, and 180 m in a direct line from the coast. Very fertile district, which will, when it is developed and provided with proper communication, become important for wheat and maize. Pop 2500.

**Alkmaar**, port in Holland, on North Holland Canal, 5 m from sea, and 25 m by rail

N N W. of Amsterdam, vessels up to 16 ft; exports butter and cheese, the latter extensively. Pop 15,000.

**Allahabad**, a district and a town in N W Provinces, British India. The town is at the confluence of Ganges and Jumna, and is also an important railway centre, 564 m N N W of Calcutta, railway bridge across the Jumna, two bridges of boats across Ganges. District produces grain, rice, millet, oil-seed, and cotton. Area, 2852 sq m. Pop of dist, 1,549,000, pop of town, 172,000.

**Alleghany**, or **Allegheny**, a river of Pennsylvania, United States, uniting at Pittsburg with the Monongahela to form the Ohio. Of 400 m. about 170 are navigable for small steamers, district abounds in bituminous coal, petroleum, and pine.

**Alleghany**, or **Allegheny**, a city of Pennsylvania, United States, on Ohio, opposite Pittsburg, iron- and steel-works, machinery, cotton- and wool-weaving, &c. Pop 130,000.

**Alleghany Mountains**, a range on E coast of United States. Sometimes taken as synonymous with Appalachians, but often restricted to the portion of that system running through Pennsylvania, Maryland, Virginia, and West Virginia, and forming the watershed between the Atlantic (to the coast of which they are parallel) and the Mississippi basin. Average height, 2000 to 2400 ft. Abound in coal, iron, and limestone, and have valuable forests—beech, ash, white oak, chestnut, hickory, and white pine.

**Allentown**, town of Pennsylvania, United States, anthracite, pig-iron, rolling-mills. Pop 35,500.

**Alleppi**, or **Alleppy**, leading port of Travancore, India, 32 m S E of Cochin, near head of large lagoon, with anchorage in 4½ fathoms of soft mud. Imports salt, paraffin oil, grain, hardware, and piece goods, exports cocoa-nut oil and matting, timber, turmeric, coffee, pepper, arrowroot, and croton. Pop 25,000.

**Allier**, a department almost in the centre of France, lying along both sides of river Allier, canals communicating with Cher and Loire, which latter river touches the eastern border, coal, iron, granite, marble, and mineral waters at Vichy and elsewhere. Area, 2822 m. Pop 422,000.

**Alloa**, a port in Clackmannanshire, Scotland, on N side of upper part of Firth of Forth, 6½ m by rail E of Stirling, and 31 m N E of Glasgow, coal, iron, brewing, distilling, wool-spinning and weaving. Harbour tidal, 15½ ft at high water of neaps, and 19½ at high water of springs, dock, 210 ft long with 11½ ft. Imports grain, timber, and dye-woods, exports coal, pig-iron, grain, ale, whisky. Pop 14,458.

**Almaden**, a town in S of central Spain, 60 m by rail W S W of Ciudad Real, quicksilver mines. Pop 8000.

**Almeria**, a province and a town of S. Spain, on the Mediterranean. The province produces fruit, esparto, salt, sulphur, iron, and zinc. The town stands a little to the W. of the river of the same name. An excellent harbour for the largest vessels. Imports coal, coke, and timber—the latter from Russia, Sweden, and America, exports iron ore, zinc ore, esparto, salt, grapes, oranges, almonds, melons, and pomegranates. The iron, esparto, and fruit, go mostly to the United Kingdom, the zinc to Antwerp; and the salt to the N. of Spain, South America, and Sweden. British shipping is hampered by the competition of bounty-subsidised Italian vessels. Distance from London, 1470 m. British vice-consul. Area of province, 3302 m. Pop 345,000, of town, 47,000.

**Alost**, a manufacturing town of Belgium, 15 m. by rail W N W. of Brussels, on the Dender, which has been canalised 8 m. to the Scheldt. Hops, lace, linen, cotton, chemicals, and hardware. Pop 30,000.

**Alpes, Basses-, Hautes-, and Maritimes**, three departments of S E France, lying, as the names indicate, along and among the Alps. The first two have sheep, and the second especially merino sheep, while the third is noteworthy for a mild and even climate, affected only by the cold and disagreeable "mistral" wind which blows suddenly from the N N W. To this mildness is due the number of health resorts scattered along the coast—Cannes, Antibes, Nice, and Mentone, as well as the little principality of Monaco. The hills are well wooded, and the soil is fertile, producing olives, oranges, lemons, citrons, vines, mulberries, and flowers—the last used in the manufacture of perfumes. Area (1) 2685 m., (2) 2158 m., (3) 1482 m. Pop (1) 115,000, (2) 109,500, (3) 293,500.

**Alps**, a crescent-shaped mountain system circling round the N. of Italy, and covering the greater part of Switzerland and portions of France, Northern Italy, Bavaria, Austria, and Bosnia. The total length is nearly 700 m., the width varies from 30 to 160 m., and the area is about 80,000 m. Looking only to height the Alps have been divided into the Fore Alps (up to about 5300 ft.), the Middle Alps (5300 to 9000 ft.), and the High Alps (9000 ft. upwards). The snow line varies from 8900 ft. on the S. side to 9200 on the N. The glaciers which fill the upper valleys descend to from 4000 to 5000 ft. above sea level—the Aletsch (4400), the Gorner-Boden (5250). By structure the Alps are divided into a central zone with rocks of granite, gneiss, mica-schist, and clay-slate, an outer zone to the N. of this, and an inner zone (which exists only in patches), to the S., consists of limestones, dolomites, sandstones, and slates. Topographically the Alps are divided into the Western Alps, extending N. and S. from Mont Blanc to the Col dell'

Altare, the Middle Alps, extending from the E. of Mont Blanc to a line drawn from the upper waters of the Adige to the Inn at Innsbruck, and the Eastern Alps from this line eastward. The minute sub-divisions of these—Cottian, Graian, Lepontine, &c., &c.—need not here be followed. The best known summits of the Western Alps are the Gran Paradiso (13,320 ft.), Mont Blanc (15,775), and the Dent du Midi (10,690), of the Middle Alps, the Matterhorn or Mont Cervin (14,775), Monte Rosa (15,215), the Strahlhorn (13,745), the Mischabelhorn (14,935), the Aletschhorn (13,770), the Jungfrau (13,670), the Monch (13,460), the Finsteraarhorn (14,020), and the Schreckhorn (13,380). Apart from smaller streams flowing to the Ligurian Sea and the Adriatic, the Alps are drained by the Rhine with its tributaries and sub-tributaries, the Thun, Aar, Reuss, and Limmat, the Danube with its tributaries the Iller, Lech, Isar, Inn, Traun, Ens, Raab, Drave and Save, the Po, with its tributaries the Dora Riparia, Dora Baltea, Ticino, Mincio, and Adige, the Rhone with the Arve, Isère, and Durance. There are many passes, of which the chief, all with carriage roads, are. From Turin the Col dell' Altare (1600 ft.) to Savona, the Col di Geneva (6080) by the Dora Riparia S W. to the Durance, Mont Cenis (6835) by the Dora Riparia N W. to the Arc and the Isère, Little St. Bernard (7170) by the Dora Baltea and Aosta to the Isère, S. of Mont Blanc, Great St. Bernard (path only, 8110) E. of Mont Blanc to the Rhone. From Milan the Simplon (5595) from Lago Maggiore to Brieg in the Rhone valley—the first well-made carriage road across the Alps, constructed by order of Napoleon I., the St. Gothard (6935) from the Ticino to the Upper Reuss valley, the Bernardino (6765) from the Ticino to the Rhine; the Splügen (6945) from Lake Como to the Rhine, the Maloja (5940) from Lake Como to the upper Inn; the Julier (7500) from the upper Rhine to the Inn, the Stelvio (9040) from Lake Como to the upper Adige. The Arlberg from the upper Rhine to the Ill, the Brenner from the Adige to Innsbruck, the Semmering (3215), 60 m. S W. of Vienna, between the upper Mur (a tributary of the Drave) and the upper Leitha (a tributary of the Danube), and the Furka between the upper Rhone and the upper Reuss. There are railways crossing by the Col dell' Altare, Mont Cenis—tunnel, highest point, 4380, over 7½ m. long, opened in 1871, Simplon—two parallel tunnels, one for railway, other for ventilation, highest point, 2312 ft., over 12 m. long, expected to be opened in 1904, St. Gothard—tunnel, highest point, 3785, over 9½ m. long, opened in 1882, Arlberg—tunnel, highest point, 4300, about 6½ m., opened in 1884, Brenner—series of twenty-seven tunnels, longest a little over ½ m., highest point, 4300, opened in 1867, and Semmering, highest point, 2970, opened in

1853 Gold, silver, lead, copper, quicksilver, iron, coal, and salt are found in various districts, while some of the valleys produce a considerable amount of cheese. The industrial products are, however, noted in connection with the different countries.

**Alsace-Lorraine**, an imperial territory in S W Germany, formed by districts taken from France in 1871. The northern portion is part of the Rhine plain, but elsewhere the surface is undulating, and the W is occupied by the Vosges Mountains which interrupt railway communication on that side, though there is traffic by the Maine and Rhine Canal on the N. and by the Rhone and Rhine Canal in the S. A third of the surface is covered with wood, and a small portion is under vines. Coal and iron have made the district industrially important, and there are manufactures of cotton and other textiles as well as of glass and porcelain. Area of territory, 5604 m. Pop 1,719,500.

**Alsen**, an island of Germany in the Little Belt, 20 m. long by 12 broad. Exports fruit. Pop 25,000.

**Alten**, a seaport in N. Norway, about 90 m S W. of the North Cape, in N latitude 69° 55', trades in fish, oil, and copper. On the shores of the Alten-fiord barley is grown, and this is the northern limit of regular cereal cultivation. Pop about 2000.

**Altena**, a town in Westphalia in Prussia, about 60 m by rail E of Dusseldorf, iron wire and hardware. Pop 13,000.

**Altenburg**, the capital of the duchy of Saxe-Altenburg, 26 m by rail S of Leipzig, manufactures linen, worsted, porcelain. Pop 37,500.

**Altendorf**, a town  $1\frac{1}{2}$  m from Essen, inhabited by artisans employed at Krupp's works. Pop, including Holsterhausen and Frohnhausen, 63,500.

**Altona**, a town in Schleswig-Holstein, Prussia, on right bank of Elbe, now practically a suburb of Hamburg, which lies immediately to the N E. Pop 161,500.

**Amazon**, the great river of South America, and the largest in the world, 3415 m in length to the farthest head stream, draining an area of nearly  $2\frac{1}{2}$  millions of m., 50 m. wide at the mouth, and carrying its waters some 300 m out to sea before they are finally lost in the Atlantic. The tide flows up about 500 m, and has, at full moon, a very marked bore, while in the rainy season the river may rise 40 to 50 ft. above its usual level. It is navigable for ships of large size (say 1000 tons) for more than 2000 m from the mouth, and including all the tributaries and side channels there are more than 25,000 m of properly navigable streams. The great forests on either side produce india-rubber and nuts, and the basin has large store of cacao, barks, sugar, coffee, ipecacuanha, vanilla, &c., as well as gold. The greater part of the course is through Brazil.

**Amboina**, or **Amboyna**, the most important of the Moluccas, though not one of the largest, 30 by 10 m, produces cloves, cassia, and coffee. The town of the same name has an anchorage with a depth of some 20 fathoms, and a pier with 18 ft of water. Area of island, 265 m. Pop 235,000.

**Ambriz**, and **Ambrizette**, in Angola, Portuguese Lower Guinea, coffee, ivory, copal, ground nuts, and copper. Regular communication from Liverpool. Letters, 24 days.

**America**. See North America, Central America, South America, and the various individual countries included in the two continents.

**Amherst**, seaport, Burma, near Moulmein; 8000 m. from London, 7930 from Liverpool. Pop 3000.

**Amiens**, chief town of the department of Somme, France, on the R Somme, here navigable for vessels of 40 to 50 tons, canal centre; 72 m by rail N. of Paris. Spinning of flax and worsted, weaving of velvet, serges, cambric, and woollens, and making of machinery, sugar, &c. Pop 91,000.

**Amoor**, or **Amur**, a name sometimes given to the whole of Russian Manchuria with an area of about 900,000 m, sometimes confined to the province forming the southern part of it with an area of about 175,000 m. It has timber and furs. Also a river dividing the province from China for a distance of nearly 1200 m. This drains an area of some 780,000 m, and has a total length of nearly 2900 m, of which over 2000 are navigable for part of the year. There is, however, very little trade.

**Amoy**, a treaty port in China, on the islet of Hainan or Amoy (11 by 8 m), nearly opposite the centre of Formosa, 280 m. N E of Hong-Kong, and 200 m S E of Fuchau. Deep, well-sheltered harbour, with a dry dock 310 ft long. Imports cotton, woollen, and metal goods, opium, bark, flour, kerosene (almost entirely from Borneo and Sumatra, the Russian and American oils handicapped by heavy long-distance freights having been practically driven out of the market), rice, &c., exports chiefly tea and sugar, but the bulk of the tea now comes from Formosa. Of a total trade of about £2,000,000 some 60 per cent is British. Regular communication with London and Middlesbrough. Distance from London, 10,015 m; Liverpool, 9940, Glasgow, 10,050. British consul. Pop 100,000, of island, about 400,000.

**Amritsar**, chief town of the district of the same name in Punjab, India, 44 m by rail N E of Lahore. A very important centre of distribution trade, and manufactures an inferior quality of cashmere shawls, and gold thread embroidery. The district has an area of about 1600 m, and a population of nearly 900,000. Pop of town, 162,500.

**Amsterdam**, the capital of the Netherlands,

and one of the great commercial cities of Europe, in North Holland, on the S side of the arm of the Zuider Zee known as the Y. Amsterdam has excellent communication by rail and canal with the rest of Holland and the whole of central Europe. It is connected with the North Sea by the great North Sea Ship Canal, constructed in 1865-76 at a cost of 2½ millions. This is 16½ m long, 88½ ft wide at the bottom, 187 feet at the surface, and 26½ ft. deep—a depth which it is proposed to increase to 30 ft. The water level is controlled by large locks at both ends, and is, in order to render the drainage of the district through which it runs easier, kept only 14 ins above low water in the North Sea. The lock at the North Sea entrance, at Ymuiden, is 738 ft. long, 82 ft wide, and 32½ ft deep on the sill. From Amsterdam also the North Holland Canal, formed in 1845, with a surface width of 125 ft, and a depth of 20 ft, runs northward for 51 m to near Helder, where the Zuider Zee and the North Sea meet between the mainland and the island of Texel. From 1825 onwards the city was connected with the Rhine by the Cologne Canal, but as the Rhine boats went on increasing in size it was found necessary in 1882-93 to replace this by a waterway mostly new. The Meerwede was therefore constructed, 44 m long, from Amsterdam by the Lek to the Meerwede, with a bottom width of 65½ ft, a surface width of 130 ft, and a depth of at least 10 ft, giving access to the Lek and the Waal. The locks are 393½ ft long by 39½ wide—those at Antwerp 46 ft—which will take in easily the largest Rhine barge so far built—one 285½ ft. long, 35½ ft wide, with a draft of 8½ ft and a carrying capacity of 750 metric tons. The cost was about £1,600,000. Amsterdam is intersected by numerous canals, and has a very extensive harbour with quay accommodation, and depth of water for the largest class of vessels. There are several dry docks, varying in length from 164 to 428 ft, in width from 62½ ft to 96, and in depth on sill from 13½ to 21 ft. The imports (a valuable example of the benefits of colonies) are coffee from Brazil and the Dutch East Indies, tea and tobacco, mostly from the Dutch East Indies, rice from Java and Burma, hides from the Dutch East Indies, indigo—still holding its own against the German artificial product—from Java, grain, flour, &c, mostly from the United States, copra, cocoa, quinine, kapok, margarine and lard, timber, petroleum, hardware, tin-plates, and coal (mostly from Great Britain). For a great deal of this, especially of Dutch colonial products, it is merely a distributing centre, passing the goods on to Germany and elsewhere, and it also exports Dutch produce, and to the United Kingdom specially, butter, margarine, and cheese. Other exports are seeds, oil, gun, linen, Westphalian coal, coke, and iron

Nearly a third of the total volume of trade, which is about 3½ million tons, is carried in British bottoms. There might be a market for briquettes, those of brown coal from the lignite districts of the Rhine having an extensive sale among the poorer classes on account of their cheapness, greater convenience and economy, and the fact that the small dealers will sell a few at a time, so that small consumers can regulate their purchases exactly to their daily wants. It would help the market for British manufactured iron in competition with Germany if the makers would adopt the continental system of "normal" manufacture, and the metric system of weights and measures. Ymuiden at the North Sea entrance to the North Sea Ship Canal has become an important fishing centre, and, with its government auction hall and sales-master, has begun to attract the attention of British sailing fishing smacks and steam trawlers. The industries of Amsterdam are mostly those of any large centre of population, but cutting and polishing of diamonds and other precious stones—mostly in the hands of Jews—are practically peculiar to the place. Regular communication from London, Leith, Grangemouth, Hull, Goole, Newcastle, Bristol, Swansea, Manchester. Distance from London, 188 m, Leith, 350, Hull, 198. Time for 12 noon at London, 12 20 P.M. Letters, 12 hours, parcels, 19. British consul. Pop 521,000.

Ancona, a province and city in Italy, the latter on the Adriatic, 183½ m by rail N.E. of Rome, and 346 N.W. of Brindisi. It is a centre of export for European goods to the Levant—grain, flour, macaroni, hides, asphalt, hemp, silks, &c. Imports coal, iron, sugar, fish, and general produce. The harbour is excellent (the port is the best between Venice and Brindisi), and will receive in certain parts vessels drawing up to 24 ft, depth at quay, 17 to 24 ft. Regular communication from Venice, distance, 120 m, sea-distance from Brindisi, 260 m. British vice-consul. Area of province, 762 m. Pop 302,500, pop of city, 57,000.

Andes, a great mountain chain, extending along the Pacific coast of South America over 65° of latitude, or 4500 m, with a breadth of from 40 to 400 m—the greatest width being in Bolivia between 16° and 20° S—and a mean elevation of over 11,000 ft. The highest summit is Aconcagua in Chile (22,860 ft.). In no part of the world are earthquake shocks so numerous and severe as along the region (some one-sixth of the whole continent) occupied by this enormous range. Volcanoes are everywhere numerous, especially in Ecuador, where nearly every peak is volcanic, and where two—Cotopaxi and Sangay—are nearly always active. The snow-line varies in the tropical region from 15,000 to 17,000 ft, and descends southward till at 46½° S—a latitude corresponding to that of central France on the north

side of the Equator—a glacier descends to the level of the sea. The southern portion of the range is well wooded, and everywhere there are at a great elevation fertile plateaux and valleys with a delightful climate, wheat growing at a height of 10,000 ft, and oats at 12,800. The Andes seem to be the original home of the potato, which grows at a height of from 9800 to 13,000 ft. The rocks are of various ages, and are mostly stratified deposits. The mineral wealth is great, gold, silver, copper, quicksilver, lead, tin, and iron, are plentiful, and there are also salt, gypsum, and coal, the silver mines are still very important, and the camps connected with them must be among the highest inhabited places in the world (some 16,000 ft.) Topazes and amethysts are found in some districts. The passes are all high and difficult, most of them passable only on mules or on the backs of Indian bearers. In Colombia the chief is the Quindiu (11,500), in Ecuador, Assuay (12,385), in Peru, Jacabamba (15,135) and Antarunga (16,196); in Bolivia, Potosi (14,320) and Guallillo (14,380), and in Chile, Planchon (9000) and Tortolas (14,750). There are railways across in Peru, from Arequipa to Puno (15,000), and from Lima to Oroya with a tunnel at 15,660 ft, and in Chile, from Antofagasta to Oruro in Bolivia (over 12,000), and from Valparaiso to Mendoza, where the route is to be completed by a tunnel (6½ m, 9845 ft) at the Uspallata Pass.

**Angers**, a town in the department of Maine-et-Loire, France, on both sides of navigable Maine, 214 m by rail S W of Paris. Wool and cotton spinning and weaving, corn, wine, slate. Pop 82,500.

**Anglo-Egyptian Soudan**—*Surface and Size*.

—The Anglo-Egyptian Soudan extends southward from Egypt proper at Wady Halfa, at 22° N, up both sides of the Nile to Lake Albert Nyanza, and westward from Abyssinia to Central Africa. Its length is, therefore, about 1400 m, and, though its breadth is uncertain, the total area has been estimated at 1,000,000 m. A considerable portion of the soil, especially along the river courses, is fertile, and by irrigation may be rendered more so, but there is also much undulating, waterless, desert plateau, in fact, the whole water-supply is so limited that it would never be sufficient for European colonisation. The rivers are the Nile and its branches or tributaries—the Atbara or Black Nile, the Blue Nile, and the White Nile (with its head-waters, the Bahr-el-Gazal, the Bahr-el-Jebel, and the Sobat).

**Government, &c**—This immense region is ruled by a governor-general, appointed, and subject to dismissal, by Egypt with the consent of Great Britain, and under him the administration of the six provinces of Dongola, Berber, Khartoum, Senaar, Kassala, and Kordofan is

carried on by governors; while the three administrative districts of Wady Halfa, Suakin, and Fashoda have administrators. The British and Egyptian flags are used together, and laws are made by proclamation. The population has been estimated at 9,000,000, and is composed of 75 per cent of negroes, and as to the remainder mostly of fanatical Mohammedan Arabs, with a sprinkling of British officials and soldiers, and European traders of various nationalities.

**Communications**—From Wady Halfa there is a line of railway up the E side of the Nile to Argo Island (209 m) at the Third Cataract, but the main line strikes south-eastward across the desert to Kula, below the extreme point of the bend at Abu Hamed, and is continued thence up the right bank of the Nile to Halfaya on the Blue Nile opposite Khartoum, a distance of 570 m. By the cutting of the sudd, also, on the upper waters of the Nile a water-way has been opened up to the great lakes, to Uganda, and to the Congo Free State; but the great desideratum of the country is still improved and extended communications. Good roads are practically non-existent, though it would not be at all difficult to make lines that would be as good as the usual country cart-road of India, and would require sand wheels only for heavy cart traffic. What is really required, however, is the development of light railways so as to provide facilities for traffic between different parts of the territory, and also for communication with Uganda, with Abyssinia, with Eritrea, and with the Congo Free State. One of the most pressing requirements is to establish communication between the Nile Valley and the Red Sea, and surveys are in progress to enable the best route to be determined, whether from the Atbara to Suakin or otherwise. Lines of steamers are also being established on the White and Blue Niles as vessels can be got up.

**Resources, Trade, &c.**—During the years of Dervish rule, under the Mahdi, the population greatly diminished, and agricultural production and trade were practically at a standstill, but since the re-establishment of British control in 1898-99, recovery from this state of misgovernment and internal chaos has been wonderfully rapid. Owing to the want of labour arising from the diminished population, cultivation of an increased area must be worked up to gradually, but there can be no doubt that, with increased irrigation (which will soon be possible on a considerable scale) properly and systematically carried out, the fertile parts of the Soudan will become of considerable importance, and there will not only be improvement in the trade in grain, gum, and forest products, but with skilled attention there will be an output of raw cotton and of cotton-seed equal in quality to those of Upper Egypt, and very superior to those of America, though they

will probably never equal what comes from the delta. Other districts will produce wheat, millet, rice, dhurra, indigo, sugar, tobacco, and fruits; while on the White Nile, and along the Abyssinian frontier, there are valuable forests of ebony, bamboo, and gum and rubber trees; and there are also wide grass regions fitted for cattle, goats, sheep, and camels. Over considerable areas along both the White and Blue Niles, the timber has been cut down for fuel for the railway to such a large extent that there is danger of interference with the rainfall, and forest conservation is at present under consideration, but the difficulty is that meanwhile the cost of coal, and even of oil fuel, is so great as to be almost prohibitive. The chief exports, so far, are gum, rubber, ostrich feathers, and ivory, and there might be export of dhurra if there were a convenient market. The chief imports are Manchester goods, but with the development of the country, once the great difficulties of bad transport, deficient irrigation, and want of labour are got over, there will probably be a demand for windmills, steam-pumps, ferries, small bridges, cutlery, implements, cooking utensils, &c. Egyptian goods pay no duty, and foreign goods the same duties as in Egypt. Letter and parcel postage as for Egypt, telegrams, 2s 3d a word.

**Angola**, the Portuguese territory in Lower Guinea, produces coffee, cotton, sugar, india-rubber, railway from Loanda about 100 m inland, and another is being constructed inland from Benguela, exports wax, hides, ivory, copal, and palm-oil; other ports Ambriz, Ambrizette, Benguela, and Mossamedes, practically undeveloped, but inland from Mossamedes is a district which might produce excellent grain. Germany has been beating Britain in the trade race for some years, except in cottons, but it is doubtful whether the gain has been a success, as the German dealers seem to have difficulty in getting in payments. British consul at Loanda. Area about 520,000 m. Pop (estimated) 2,500,000.

**Angora**, a town in Asia Minor, 140 m N by E of Komeh. Noted for goats with long, silky, wool-like hair, coal as yet unmined. British consul. Pop 40,000.

**Angostura**. See Ciudad Bolivar.

**Angra Pequena**, a bay amid a district with nitrates, both potash and soda, in German West Africa.

**Anhalt**, a duchy of central Germany, eastern portion flat and fertile, with wheat, flax, rape, hops, and tobacco, western part, towards Hartz mountains, with mineral wealth—lignite, silver, lead, copper, and hematite. Area, 906 m. Pop 316,000.

**Anjer**, seaport, W coast of Java, 8300 m from London.

**Annam**. See French Indo-China.

**Antigua**, one of the British West India

Islands, seat of government of the Leeward Islands. It is 28 m long and 14 wide, but only some 16,000 acres are cultivated. Almost the only product is sugar. Regular communication from London, distance, 3830 m. Letters, 15 days, parcels, 16. Pop. 35,000.

**Antioquia**, an important department of Colombia, rich in gold and silver. Excellent field for mining operations with modern machinery, if communication could be improved. If the two small railways at Buenaventura and Puerto Berrio on the Magdalena were united, a rich and extensive mining district would be opened up. Area, 22,316 m. Pop 470,000.

**Antofagasta**, a province and a seaport in Chile. The province is the largest in the country, stretching from the Pacific to the Bolivian and Argentine frontiers. Rainless, and agriculture only possible where irrigation water can be obtained. Great silver mines discovered in 1870 at Caracoles, and there are extensive deposits of nitrate of soda and salt. The seaport has anchorage in 15 to 40 fathoms, with a bad rocky bottom, and vessels discharge into lighters of 30 to 35 tons. This is the transit port for Bolivia, there being a railway from Oruro across the Andes, and it receives coal, machinery, textiles, and general goods, exports nitrate of soda, silver, copper, antimony, tin, gold-bearing lead, wolfram, zinc, borate of lime, hides, chinchilla skins, and cinchona and bark. Regular communication from London and Valparaiso, distance from Valparaiso about 600 m. British vice-consul. Area of province, 47,932 m. Pop 45,000, pop of town, 19,500.

**Antrim**, county with land area of 711,275 acres in the N E of Ireland (Ulster), iron ore, rock salt, alum, spinning and weaving of linen and cotton. Pop (exclusive of Belfast) 196,090.

**Antwerp**, the capital of the province of the same name, the great port and commercial city of Belgium. It stands 27 m by rail N of Brussels, on the right bank of the Scheldt, 50 m from the sea, and has excellent communication by rail and canal in all directions, but many of the waterways are of old type and not fitted for modern canal boats of large carrying capacity. Some of them, however, giving connection with the Meuse and Seine, have a bottom width of 32 ft, and will take vessels of 300 to 380 tons, with a draught of 6½ ft. The trade of the port with western Europe, the United Kingdom, North America, the Argentine Republic, and Uruguay, is very extensive. The total tonnage entering and clearing amounts to over 13 millions annually, of which more than half are British. The harbour is excellent, there being over 2 m of quay along the river, accommodating vessels of 28 to 30 ft. of draught, while there are docks with a depth of

19½ to 21 ft. There are ten dry docks, the largest with a length of 500 ft. The chief industries are connected with shipbuilding, sugar, textiles, lace, petroleum, printers' ink, tobacco manufacture, and the cutting of diamonds and other precious stones. Imports grain, raw products (textile, chemical, and mineral), timber, hides, oil-seeds, coal and briquettes, india-rubber, chemicals, coffee, machinery, cotton tissues, iron, wine, flax thread, and woollen goods, exports, apart from sending out imports in transit, glass, coal, railway and tramway carriages, zinc, chemical products, sugar, manure, dyes, iron and steel, cotton, coke, and drugs. Regular communication from London, Hull, Leith, Newcastle, Grimsby, Goole, Harwich, Glasgow, Swansea, Manchester, Bristol. Distance from Leith, 445 m, from Hull, 263 m. British consul-general Letters, 10 hours, parcels, 14. Area of province, 1093 m. Pop 819,000, pop of town, 285,600, exclusive of the suburbs of Berchem and Borgerhout, which have about 110,000 inhabitants.

**Apennines**, a mountain chain beginning in the Maritime Alps and extending southward through the peninsula of Italy and into Sicily. The average height is about 4000 ft, sinking in the N to 3500 and rising in the centre to about 7000. Highest point Monte Corno, Gran Sasso d'Italia, 9578 ft. The range is crossed by seven railways at heights of from 1500 to 2000 ft. Below snow-line. Marble at Carrara, Seravezza, and Siena.

**Apia**, centre of trade in Samoa, near middle of W coast of Upolu Island. Roadstead 5 to 7 fathoms, exposed in wet season. Imports general goods, exports copra. British vice-consul.

**Appalachian Mountains**, a great mountain system, extending over 1300 m. from N to S along the Atlantic coast of the United States. By the valleys of the Hudson and the Richelieu, and by Lake Champlain, through which there is direct communication from New York to Montreal, it is divided into two unequal groups, the Green and White mountains to the N, and the Parallel ranges of the Alleghanies and Blue Mountains to the S. The highest point is Black Dome (6707) in the Blue Mountains in North Carolina. Passing W from the Hudson is the Mohawk valley, with the Erie Canal and the railway which places New York in direct communication with the west. Another railway and the Chesapeake and Ohio Canal cross by the Potomac valley. Railways also cross by the Delaware on the borders of Pennsylvania and New Jersey, by the Cumberland Gap where the Virginia, Kentucky, and Tennessee meet, by the Swananoa Gap, S of the Black Dome, and at several other points. From Pennsylvania to Alabama the rocks are the true coal measures, and there is abundance of iron ore.

**Appenzell**, a German-speaking canton in the

N E of Switzerland, 1300 to 8000 ft above sea-level, divided into Outer Rhodes (Protestant), with cotton and linen weaving and dyeing, and Inner Rhodes (Roman Catholic) with agriculture. Area, 162 m. Pop 69,000.

**Aquila**, a province and city of Italy, in Apennines, the latter 64 m by rail S E of Terni, trade in saffron. Area of province, 2484 m. Pop 398,000; pop of city, 21,500.

**Arabia**, a peninsula of Asia, irregular parallelogram in shape, extending southward with the Persian Gulf and the Gulf of Oman on the E, and the Red Sea on the W. It is united to Africa at the Isthmus of Suez, has a length of about 1500 m, an average breadth of about 800 m, and an average elevation of about 3500 ft, the table land sloping abruptly down on the N. and S W more gradually elsewhere. Climate very dry and very warm. Greater part of surface barren desert, but most of coast strip fertile. Produces wheat, barley, millet, tobacco, cotton, sugar, tamarinds, gums, resins, coffee, dates, figs, spices, and drugs, of which the last five are exported. Area about 1,200,000 m. Pop about 4,000,000.

**Aracaju**, seaport of Brazil, chief town of the small state of Sergipe to the N of Bahia. The depth of water from 10 to 14 ft. according to the season of the year, but there is a bar at the entrance to the Cotanguaba river on which the town is situated. British consul. Pop 20,000.

**Arbroath**, a town in Forfarshire, Scotland, on the coast, linen manufactures, sail-cloth, leather, bleach-fields, tidal harbour, imports of ordinary coasting trade with the addition of flax, hemp, jute, and bleaching powder, exports sail-cloth, yarns, linen, paving stones, and ordinary coasting-trade goods. Pop 22,398.

**Arcachon**, watering-place in the department of Gironde, France, 35 m by rail W S W of Bordeaux. The Bassin d'Arcachon, a great lagoon here, shows the value of scientific method, oyster culture being carried on after the most approved methods, the beds turning out about 5,000,000 a year. The pine forests around produce wood and resin, and there would probably be a direct demand for British preserves, beer, whisky, &c, and for cod-liver oil emulsions and tonics for the invalids who resort to the district for lung diseases. British vice-consul. Pop 8000.

**Archangel**, a district and town in North Russia. The district covers the whole country between Lapland and the Ural Mountains. Great tracts of most valuable forest land. Products timber, charcoal, tar, and wooden goods. The town is on the northern Dwina about 40 m up from the White Sea, 731 m N E of St Petersburg. The channel is 18 ft deep, and the depth on the bar is 21 ft. Communication by river and canal with most of European Russia—Moscow—Juroslav (Dwina trade) and

Perm-Kotlass (for the Siberian Railway), &c. Navigation is open from about the third week in May to the middle of November. Imports coal and machinery (mostly from United Kingdom), hardware, cement, oil, lead, and general goods, exports wheat, timber, oats, rye, linseed, flax, tow, codilla, pitch, and turpentine. Outlet for Siberian grain. Distance from Sunderland, 1877 m. Over 70 per cent of trade is with United Kingdom, but only about 35 per cent is in British bottoms. Distance from the Tyne, 1880 m. British vice-consul. Area of the district, 331,640 m. Pop 348,000; pop of town, 20,000.

**Ardèche**, a department in central France, W. of the Rhone, very rugged and mountainous, and forming part of the central plateau. Produces olives, vines, mulberries, and chestnuts. It is the principal silk-producing department of the country, and there are a number of iron mines. Area, 2136 m. Pop 354,000.

**Ardennes**, a frontier department in the N of France, traversed by the Ardennes Canal, which connects the Meuse midway between Sedan and Mézières and the Aisne at Rethel. Woollen manufactures, iron and copper works. Area, 2020 m. Pop 316,000.

**Ardrossan**, a port on the Firth of Clyde, in Ayrshire, 32 m by rail S.W. of Glasgow. Good harbour, which can be entered at high water of spring tides by vessels drawing 25 ft and at high water neap tides by vessels drawing 23 ft. Wet dock, with depth at entrance of 27 ft at high water. Imports iron ore, limestone, &c., exports coal and pig-iron. Distance from Liverpool, 170 m. Pop 6077.

**Arecibo**, a port in Porto Rico, 41 m W. of San Juan. Natural harbour, with depth of 20 to 24 ft. Imports cotton goods, exports sugar and West Indian produce. British vice-consul. Pop 11,000.

**Arendal**, a port on the bay of Christiania in the S.E. of Norway. Excellent natural harbour in the bay itself, which is protected by the island of Tromø, from 8 to 20 fathoms deep. Exports timber, pulp, sawn wood, copper, iron, and lobsters. Regular communication from Newcastle. Distance from London, 542 m, Leith, 430, Hull, 435, Liverpool, 880, Glasgow, 810, and Cardiff, 940. British vice-consul. Pop 4500.

**Arequipa**, a town and coast department of Peru, between 15° and 17° 20' S. There is considerable trade from the port of Islay on the Pacific to the interior of the country. District exports, through Mollendo, wool (ordinary, alpaca, llama, and vicuña), almost all to Liverpool, coco leaves, mostly to Hamburg, borate of lime, mostly to Hamburg, though some goes to Liverpool and Glasgow, and hides. The railway from Mollendo by Arequipa to Puno, 218 m long, has a summit

level of 11,460 ft. British vice-consul. Area of province, 21,917 m. Pop 220,000, pop. of town, 30,000.

**Argentine Republic, or Argentina**.—*Surface and Size*.—Argentina is a federal republic of South America, lying between 22° and 55° S. and between 55° and 75° W. The length is about 2300 m, the greatest width from the crest of the Andes to the river Uruguay about 800 m, and the area about 1,111,000 m. It is bounded N by Bolivia; N.E. by Paraguay; E by Brazil, Uruguay, and the South Atlantic Ocean; and W. by Chile, from which it is divided by a line running along the highest crest of the Andes to 52° S, a little to the N of the Strait of Magellan, and thence eastward, leaving both sides of the strait in Chile (the waterway, however, being considered neutral), and then again southward along the line of 68° 30' through Tierra del Fuego. The surface has a gradual slope from the foot-hills of the Andes on the W. towards the E, and almost the whole of it consists of great plains. Of the flat ground the part to the N is densely wooded, the central Pampas portion has great stretches of treeless pasture, and the southern portion contains expanses of stony desert with patches of stunted thorn bush. The drainage of the N and centre is carried off by the Paraná (with its tributaries the Pilcomayo, the Vermejo, and the Salado), and the Uruguay, which forms the boundary with the republic of the same name. Farther S are the Colorado, Negro, Chubut, Chico, and Santa Cruz, and in the interior a number of streams end in marshes. The rainfall over a great part of the country is from 30 to 40 in, but diminishes in some places to 3 in. It is naturally less from N to S and from E to W.

*Constitution and Government*.—The republic consists of fourteen provinces and nine territories. Of the former, four—Buenos Ayres, Santa Fé, Entre Rios, and Corrientes—lie along the R. Plate and the Uruguay and Paraná; four—Rioja, Catamarca, San Juan, and Mendoza—along the Andes; three—Cordoba, San Luis, and Santiago del Estero—in the centre of the country; and three—Tucuman, Salta, and Jujuy—in the N. The territories are Formosa and Chaco in the N, Misiones in the extreme N.E., and Pampa, Rio Negro, Neuquen, Chubut, Santa Cruz, and Tierra del Fuego, all except the first in the narrower part of the country running southward. There is a president elected for six years by specially chosen representatives of the fourteen provinces, and the legislative bodies are a Senate of thirty, and a House of Deputies of, meanwhile, 133 members, the rule being that there should be a deputy for every 33,000 inhabitants. The pop is about 5,000,000, of which the towns have over a half.

*Communications*.—There is a coast line of

some 2700 m, and the Paraná and Uruguay are navigable for many hundreds of miles. Road communication is difficult, as, owing to the scarcity of stone, there is a lack of road metal, and slight hollows become, in wet weather, impassable quagmires. There are about 11,000 m of railway, and the flatness of the surface and the absence of rivers render railway construction easy and cheap, but, on the other hand, many of the lines run through sparsely populated districts, and have not been devised to serve and develop the country. Duplicate lines often run within a few miles of each other, while remoter parts of the country are left without communication altogether. Regular extension is, however, going on.

*Resources and Productions*—With a country extending over so many degrees of latitude the products vary greatly in character. In the tropical and sub-tropical districts of the N there are great forests of hardwood, unequalled for railway sleepers, piles, etc., and one kind of tree (*quebracho*) is of supreme excellence in connection with tanning, doing its work quickly and cheaply and giving a good colour. In this part of the country, too, tobacco, jute, ramie, sugar, castor oil, and tropical fruits are produced in large quantities for export. In the Andes district, in the centre, the magnificent forests of a kind of pine are being worked, and considerable quantities of timber sent down by river and rail. In the extreme S, on the other hand, the collecting and storing of natural ice, and seal-hunting, are extensively carried on. Fibre-producing plants abound, but, even were the best machinery set up and skilled hands employed, the lack of coal would probably be fatal meanwhile to success. Economic minerals of almost every kind exist, but they cannot yet be worked with profit in consequence of the difficulty and cost of transport. Good coal is said to exist along the Andes from San Luis to Neuquen, and a salt industry is springing up. While the timber is a source of wealth, it is on agriculture and pasture that the country relies. Of these the first may be said to be merely in its infancy, for the total amount of area available for cultivation is set down at 240,000,000 acres, and sheep fed on the pastures might be multiplied fourfold. It is probable that in the future the Argentine will also be the great cattle area of the world. Argentina is the second wool-producing country in the world, with a total of 370,000,000 lbs. The chief crops are wheat, linseed, oats, barley, bird-seed, rye, and maize. Sugar-cane and vines are also cultivated, but the sugar and wine are of poor quality.

*Imports and Exports*—Of a total import value of about £24,000,000, the United Kingdom sends a little less than one-third, while of an export

value of about £34,000,000, it takes over one-sixth, the other chief importing and exporting countries are Germany, Italy, the United States, France, and Belgium. Of a total trade of about 4½ million tons nearly 2½ millions were British. The chief imports from Britain are cotton and linen goods, jute manufactures, coal, agricultural machinery, iron, beer, silk, and cement; the chief exports to Britain are hides and skins, hair, tallow, beef, cattle, butter, sugar, wheat, maize, linseed, bran and pollards, and oil-seed. Argentine wool goes mostly to continental Europe. The butter trade is growing, and newly introduced and likely to prosper is the export of chilled beef (actual freezing being avoided), and of frozen hares. Motor cars are being imported, and there is a steady demand for electric appliances for domestic use and for tramway purposes. Other lines in demand are hardware, galvanised iron for roofing, fencing-wire, lumber, carpets, stationery, hessian-cloth for bags, rope, twine, tar, sewing machines, and sheep dip. Increased business might be done by British merchants in agricultural implements and machines (resembling those imported from the United States, made to standard sizes, and accompanied by spare parts duly numbered to make replacing easy), light two- or four-wheel carriages, railway and electrical-tramway plant, and appliances generally for mechanical land transport, soft steel girders for house-building, iron windmills for driving water-pumps on the cattle ranches, simple, accurate, and durable weigh-bridges for cattle ranches, and raw materials for the manufacture of soap and candles. Most of the soda ash and caustic soda is sent from the United Kingdom, but none of the tale, little of the resin, and less palm-oil and wick from year to year. There are openings for capital in the rearing of pigs, and in the curing of ham and bacon, many parts of the country being suitable, and a considerable quantity of the last two imported. A great desideratum for pushing British trade is the employment of good travellers, speaking Spanish fluently, able to show samples, and furnished with price lists in Spanish, with prices in the currency of the country, and sizes, weights, &c., according to the decimal system. Weights, sizes, patterns, and style of packing, should be varied to suit customs requirements, or even fancies. It may be taken for granted that consumers and officials in Argentina will not alter their ideas to suit British manufacturers. For example, metal baths, with or without taps, are valued for the customs *ad valorem* duty at £7, the Americans send baths with connections attached, the British merchant does not, and so pays duty on the taps as well as on the baths. Floor tiles pay duty by weight, and here again the American by making his product light is able to sell more cheaply and secure the

market, British exporters of spirits persist in using reputed quart bottles, six to the gallon, but for customs purposes each of these is charged as if it contained a litre of which only some 1½ go to the gallon. The consequence of all this is that British trade is falling off, and American and German increasing—the first being the more dangerous. Where it is not possible to have a traveller, carefully selected agents with a good knowledge of the market should be appointed. All quotations should be c i f. and f o b, and the latter should really be f o b, without irritating additions for packing or for packing cases. Packing should also be carefully attended to in order to avoid damage in transit.

There are British consuls at Buenos Ayres and Rosario, and vice-consuls at Bahia Blanca, Cordoba, Entre Rios, La Plata, San Nicolas, and Santa Fé. Letter postage from the United Kingdom, 2½d per half-oz, post-cards, 1d, telegrams *via* France, Teneriffe, and Brazil, 3s 11d per word, other routes 4s 2d. Mail from London about every five days, reaching Buenos Ayres about twenty-two days thereafter.

*Money, &c*—The standard is gold, but the business unit is the silver dollar (*peso fuerte*) of 100 centavos. Its reputed worth is about 4s, but the currency is mostly a forced paper one, and the paper dollar is worth a little under 1s 9d. The gold coin is a five-dollar piece. The old weights and measures were the quintal, 101 40 lbs avoirdupois, the arroba, 25 35 lbs avoirdupois, and the fanega, 1½ imperial bushels; but the metric system (*see* France) is now the only legal scale. A bale of wool, of sheep skins, or of hair, weighs 990 lbs, a bale of goat skin, 814 lbs, a bale of hay, 110 lbs, a pipe of tallow, 880 lbs, a hogshead of tallow, 440 lbs; a cask of tallow, 220 lbs, and a case of butter, 55 lbs. The Argentine flag has three horizontal bars, the top and bottom blue, the centre white with a golden representation of the sun.

**Argostoli**, the chief port of the island of Cephalonia, Greece, good anchorage with 3 to 5 fathoms of water close to the town, exports currants and wine, imports cotton, linen, and woollen goods, coffee, sugar, fish, hardware, hides, leather, sulphur, and general goods. British vice-consul. Pop. 12,000.

**Arica**, a seaport and a department of Chile in 18½° S. The town, which is by rail 38 m from Tacna, has a roadstead where vessels anchor in 6 to 10 fathoms of water, loading and discharging being carried on by means of lighters. The port is one of the principal outlets for the products of Bolivia. Exports copper and silver ore, barks, chinchilla skins, and alpaca and vicuña wool. Distance from London, 9800 m, from Liverpool, 9700, and from Glasgow, 9800. Regular communication from London and Valparaiso. Letters, 35 to 43

days. British vice-consul. Pop. of town about 3000.

**Arriège**, a frontier department in the S of France, extending up the northern slopes of the Pyrenees, where it reaches at Montcalm a height of 10,513 ft, and at Estats, of 10,800 ft. Extensive forests, valuable iron ore, said to be the best in France for the manufacture of steel, lead, copper, zinc, and manganese. Along the pass of Puymorens (6335 ft.), runs the main road from Toulouse. Area, 1890 m. Pop. 210,500.

**Arita**, a town in the W. of the island of Nagasaki in Japan. An important centre of porcelain manufacture. Pop. about 6000.

**Arizona**, a territory in the S W of the United States. The N W. is traversed by, and the western boundary formed by, the Colorado R, which here flows through the deep ravine known as the Grand Cañon of Colorado, which is more than 300 m long, and a mile below the surface of the Great Plateau through which the river has worn its course. The greater part of the territory is barren, but over 10 million acres might be reclaimed by irrigation. Minerals are very valuable, especially silver, gold, and copper, the production of silver and gold being estimated at over £1,250,000 annually. Coal, salt, and lead are also found. The central part of the territory is traversed by the Atlantic and Pacific Railway, and the southern portion by the Southern Pacific Railway. There are large herds of sheep and cattle, and in the S W. the cultivation of sugar has been tried with success. Area, 112,920. Pop. 123,000.

**Arkansas**, a state of the United States, W. of the Mississippi. Communication by water excellent, as the Mississippi forms the boundary for about 400 m, and the Arkansas, Washita, St Francis, Black, Red, and White Rivers, as well as the Saline, are all partly navigable, the total length of waterway being about 3000 m. A considerable portion of the surface is covered by forests, with yellow pine, oak, poplar, and walnut, and the state is also rich in minerals, including coal, iron, manganese, granite, and hone-stone. In the E there is a swampy portion, which is one of the chief cotton-growing districts of America, it being asserted that the cotton lands might, if producing as much as they could raise, turn out a quantity of cotton equal to the whole present export of the United States. Area, 53,045 m. Pop. 1,312,000.

**Arles**, a river port in the department of Bouches-du-Rhône in the S of France, 15 m from the Mediterranean, and 53 m by rail N W of Marseilles. The Arles canal, which takes vessels up to 300 tons, extends from here for 25 m to the Mediterranean at Bouc. The town has manufactures of silk, twist, tobacco, brandy, soap, glass-bottles, and railway-wagons. Pop. 29,500.

**Armagh**, a town, and an inland county, of Ulster, Ireland. In the S the latter rises to a height of about 1900 ft., but is elsewhere flat with a good deal of bog. It has good railway communication, and is skirted by the Newry and Ulster canals. Linen and cotton weaving. Area of the county, 312,658 acres. Pop. 125,392, pop. of town, 7588.

**Armenia**, a district of Western Asia, some 500 m long by nearly the same width, divided between the Turkish vilayets of Erzerum and Diarbekir, and the Russian government of Erivan, portions of Kars and Tiflis, and part of the Persian province of Azerbaijan. The surface consists of a series of pastoral plateaus from 3000 to 7000 ft above sea level, traversed by mountain chains, which reach a height of from 12,000 to over 17,000 ft, the highest point being Mount Ararat (17,212 ft). The drainage is carried off by the Euphrates, Tigris, Aras, and Kur. The climate is severe owing to a want of protection from the cold north winds, but the valleys have vineyards and orchards, and produce cotton, tobacco, maize, rice, hemp, and flax. The mineral productions include copper, silver, lead, iron, arsenic, alum, and rock salt.

**Arnhem**, the chief town of Guelderland, in Holland, on the right bank of the Rhine, 38 m by rail S E of Utrecht. Manufactures woollen and cotton fabrics, tobacco, soap, and paper. Pop 57,500.

**Arras**, the chief town of the departement of Pas-de-Calais in N France, on the navigable Scarpe, 120 m N of Paris. Has trade in corn and oil, and manufactures agricultural implements, lace, and hosiery. Pop 26,000.

**Arru Islands**, a group of coral islands off the S W coast of New Guinea, in the Arafura Sea. The natives receive cotton goods, hardware, cutlery, arms, opium, and spirits, in exchange for which they barter pearls, mother-of-pearl, tortoise-shell, and trepang. Area about 2800 m. Pop about 20,000.

**Ashanti**, a negro district in Upper Guinea, lying N of the British Gold Coast Colony, and since 1896 a British Protectorate. The surface is covered with wood, but the land cultivated in the neighbourhood of the towns produces large crops of grain, tobacco, sugar, cocoa, and pine-apple, and the gums, dye-woods, and timber are also important. The chief exports are gold dust and palm oil. Area about 20,000 m, and the estimated pop about 3,000,000.

**Ashton-under-Lyne**, a town in Lancashire, England, 6 m E of Manchester. Excellent railway communication, and connected by canal with Manchester, Huddersfield, and Derby. Coal field, cotton-weaving, bleaching, dyeing, print works, and machinery. Pop 43,890.

**Asia**, the largest of the great divisions of the globe, bounded N by the Arctic Ocean, E

by the North Pacific, S by the Indian Ocean, S W by Africa, and W by Europe. It is separated from America on the E by Behring Strait, which is only 36 m wide; is united to Africa on the S W by the Isthmus of Suez, and so united to Europe along the western side that Europe may indeed be considered but an offshoot of the larger continent. It extends from Cape Chelyuskin, 77° 30' N, to Cape Romania, 1° 22' N, in the extreme S of the Malay Peninsula, a distance of some 5350 m, and from Cape Baba, 26° E in the extreme W of Asia Minor, to East Cape at Behring Strait, 170° W, a distance of over 6000 m. The area, slightly over 17½ million m, is very nearly one-third of the whole land surface of the world, about one-seventh more than all America, half as large again as Africa, and four times as large as Europe. In shape the continent may be said to have a roughly quadrangular central core, with a number of peninsulas projecting to the S, and a chain of islands running down the E coast and shutting off a line of inland seas. The coast, which has an extent of probably 36,000 m, is therefore, of course, very irregular, but in the best trading districts there are few good harbours, and the seas are dangerous on account of the sudden and violent storms. The E coast is fringed by the sea of Okhotsk with the peninsula of Kamchatka, and the Kurile Islands on the outside, the sea of Japan, with the Japanese Islands outside, the Yellow and East China Seas, with the Lau-Kiu Islands outside, and the South China Sea, with the Philippines and Borneo outside. To the E of India is the Bay of Bengal, and to the W the Arabian Sea, off which open the long narrow Persian Gulf and Red Sea, forming the north-eastern and south-western boundaries of Arabia respectively. Extending south-eastward from the main continent are the islands of the Eastern Archipelago (Sumatra, Java, &c.), linking Asia to Australia. The continent is an area of great mountain ranges, great table-lands, and great rivers. From the district in the S W, where India, Afghanistan, Russian Turkestan, and China meet, known as the Pamir—often called "the roof of the world," a lofty plateau with peaks and ridges rising from, and around, it to a height of from 20,000 to 26,000 ft.—a number of great mountain chains run out in all directions. A series of more or less parallel ranges (the Thian Shan Mountains, the Altai Mountains, &c.), passes north-eastward across the whole land to the Sea of Okhotsk, another more or less continuous line trends roughly south-eastward and eastward (Himalayas) to the border of China, where it breaks up into a confused mass of ridges, northward between China proper and Tibet, southward through Burma and down the Malay Peninsula, and south-eastward and eastward into China. From the western end

of the Himalayas a range curves eastward round the N. of Tibet to meet the cross mountains between Tibet and China proper. From near the place where these approach one another on the upper Hoang-Ho still another great range curves round the N. of the middle Hoang-Ho, and then northward to the middle valley of the Amur. From the Pamir still other ranges pass south-westward through India and Afghanistan, and westward towards the Caspian. To the N. of the ranges first described the surface (one-fourth of the whole), with a mean level of some 600 ft., slopes northward to the Arctic Ocean, the great rivers being the Obi, the Yenesei, and the Lena. To the S. of the ranges stretching westward, as far as the cross mountains between the Hoang-Ho and Amur, is the great barren tract known as the desert of Gobi, with a mean elevation of slightly over 3000 ft., and with such streams as there are losing themselves in salt lakes. All the central regions of the continent are, as might be expected, very dry, the mountains to the S. taking the moisture from the warm winds of the Indian Ocean before they reach the interior. To the N. of the Himalayas, and between them and the mountains skirting the southern side of the desert of Gobi, is the tableland of Tibet, with an average elevation of from 10,000 to 17,000 ft. To the S. of the Himalayas is the peninsula of India, with the tableland of the Deccan (1500 to 3000 ft.), and in the S.W. the tableland of Arabia (2500 to 7000 ft.). Eastward from the mountains of Afghanistan are the plateaus of Iran, Armenia, and Asia Minor, with a height varying from 3500 to 5000 ft. There are lowland plains along the western Caspian-Obi district (some parts of the country about the Caspian being even under the level of the main ocean), in China and Manchuria, Siam, and Lower Burma; in the great curve formed by the valleys of the Ganges and Indus in the N. of India, and in the valleys of the Euphrates and Tigris. The great rivers of the S.E. are the Hoang-Ho and the Yang-tse-kiang. In the S. the chief rivers are the Irrawadi, Cambodia, Salween, Brahmaputra, Ganges, and Indus, at the head of the Persian Gulf the Euphrates and Tigris, and in the W. the Sir Daria and Oxus (Amu Daria) flowing to the inland Sea of Aral. The climate is naturally very varied and intensely continental. About Verkhoyansk ( $67^{\circ} 34' \text{ N}$  and  $134^{\circ} 20' \text{ E}$ ) is the coldest portion of the eastern hemisphere, with a mean annual temperature of  $2^{\circ} \text{ Fahr}$ . From this the warmth gradually increases southward, the isotherm of  $10^{\circ}$  passing roughly E and W from Behring Sea to the mouth of the Obi, of  $20^{\circ}$  from the Sea of Okhotsk to the S. end of Nova Zembla, of  $30^{\circ}$  from the N. end of Saghalien to the White Sea, of  $40^{\circ}$  from the S. end of Saghalien to St. Petersburg, of  $50^{\circ}$  from the middle of

Japan to the Sea of Azov, of  $60^{\circ}$  from the S. end of Japan to Cape Baba, of  $70^{\circ}$  from Hong-Kong to Syria, of  $80^{\circ}$  (a very irregular line) from the middle of the Philippines to Calcutta, thence round the Himalayas back by the Gulf of Cambay, across to the entrance of the Persian Gulf, and from that westward across the middle of Arabia. The curving is of course due to the neighbourhood of the sea. The winter lines are curved everywhere out in the centre southward, and the summer lines are curved still more markedly and to a much greater distance to the N.E., following in each case the course of the monsoons, which blow from the N.E. from October to April, and from the S.W. from April to October. The rainfall is great in the lines where the high ground intercepts the wet winds, the coastal regions and the eastern Himalayas having over 90 in. and the Indo-China Peninsula, 75, but there are great runless, or nearly runless, stretches of country where there is nowhere more than 2 in.—e.g. over part of Tibet, the great desert of Gobi and part of Mongolia, 2500 m. long and 1200 broad, and again along Baluchistan and the plateau from Persia westward. The productions, &c., are dealt with in connection with the separate countries. The population is estimated at about 865,000,000.

Asia Minor, or Anatolia, a western peninsula of Asia, forming part of the Turkish Empire. It lies between  $36^{\circ}$  and  $42^{\circ} \text{ N}$  and  $26^{\circ}$  and  $42^{\circ} \text{ E}$ , and is bounded N. by the Black Sea, E. by Russia and Persia, S. by the Mediterranean and Syria, and W. by the Bosphorus, the Sea of Marmora, the Dardanelles, and the Ægean Sea. The coasts are broken, but rise steeply at no great distance from the sea, the general surface of the district being a plateau, about 750 m. long by 420 wide at the broadest part, and sloping gradually up from W. to E., the mean elevation being probably about 3000 ft. The central tableland is bounded by mountain ranges on both N. and S. (greatest height of the former about 9000 ft. and of the latter about 13,000), and elsewhere many minor ridges and isolated cones rise above the general surface. This portion is largely an area of inland drainage with salt lakes, but elsewhere there are fertile river valleys and coast strips, and in the S. is the plain of Adana. Roads, as we understand them, are practically unknown over the greater part of the peninsula, and traffic is dependent on horses, camels, and mules, but railways from Smyrna and the Bosphorus open up several of the western valleys. One has got as far as Angora and another to Konieh, whence they are to be extended so as to give communication with Baghdad and the Persian Gulf. Other lines are Smyrna to Alashehr-Ak-Hissar and Soma, Smyrna to Aidin and Dinair, Mudania to Broussa, and Mersina to Adana. The hill slopes are covered with trees.

—walnut, box, oak, beech, plane, and ash, and there are many sheep, goats, and horses, manufactures, silks, cottons, carpets, mohair, wine, soap, liquorice-paste, and copper utensils, imports textiles, iron, coal, petroleum, and sugar, exports wheat, box and other woods, salt fish, figs, barley, millet, sesame, olive oil and oil seeds, cattle, hides, mohair, wool, carpets, raw silk, opium, scammony, galls, tragacanth, raisins, wine, liquorice, wax, tobacco, meerscham, soap, and various ores Area about 195,000 m Pop estimated at nearly 9,355,000.

**Aspinwall.** See Colon

**Assab**, a bay, with an Italian trading station, on the W coast of the Red Sea, 40 m. N W. of the Strait of Bab-el-Mandeb

**Assam**, a province in the extreme N E of India, of which the northern part lies along the valley of the Brahmaputra, the southern part lies along the valley of the Surma, and the centre consists of hill districts lying between the two rivers There is a large amount of forest ground and fertile land Assam produces about three-fourths of all the tea grown in India, there being about 1000 tea plantations covering over 6,000,000 acres, and there are extensive tracts of good ground not yet taken up There are large deposits of coal, the working of which is being rapidly extended, and petroleum is also worked, as well as iron ore and limestone The forest region produces rubber, sal and other hardwoods, and a tree resembling the lacquer tree of Japan The country also produces mustard, gold, ivory, amber, and lead From Bengal, Assam receives woollen and cotton fabrics, salt, glass, earthenware, tobacco, opium, and betel Area, 56,243 m Pop about 6,126,500

**Assiniboia**, a district of the N W of Canada, bounded E by Manitoba, W by Alberta (from which it is divided by the 111° line of W. longitude), S by the United States, and N by Saskatchewan, from which it is divided by the line of 52° N latitude It has a length of about 450 m and a breadth of about 205 m Communication is afforded by the Canadian Pacific Railway, which passes across the territory, and the principal rivers are the Assiniboine, the Qu'appelle, the South Saskatchewan, and the Souris The eastern portion of the surface is on what is called the second prairie steppe, with an average height of about 1600 ft above sea level, and the western half on the third prairie steppe, about 2000 ft. The eastern portion is a continuation westwards of the great grain-producing area of Manitoba, and the soil, though lighter than the deep black loam of that district, is very rich and productive, and produces excellent crops of wheat, grass, grain, and vegetables The winters are cold with a good deal of snow, but the summers are delightful, and cyclones or violent storms are practically unknown. There is a good

market for all kinds of grain and dairy produce, and good openings for settlers who wish to try grain raising and mixed farming The western portion of the territory, on the other hand, is unsuited for agriculture, unless with the aid of irrigation, and, though the soil is fertile, liability to drought renders attempts to grow grain very risky, while irrigation is in many districts impossible owing to lack of water. Settlers therefore must devote themselves to stock raising and dairy farming. The climate is not so severe as it is farther east. There is little snow, and cattle, horses, and sheep can graze outside all the year round Artificial feeding need only be resorted to for very short intervals in exceptionally stormy weather. Area, 89,535 m Pop about 67,500

**Assouan**, the furthest S town in Egypt proper, on the right bank of the Nile, immediately below the first, or lowest, cataract British vice-consul

**Astoria**, a town in Oregon, United States, 8 m from the mouth of the R Columbia, centre of the tinned-salmon trade, there being fifty large canning establishments in the neighbourhood, and oyster culture is also carried on, coal in surrounding district. Of a sea-going tonnage of over 50,000 tons a year, 67½ per cent. are under the British flag. British vice-consul. Pop 8500

**Astrakhan**, a town and a government in the S E of European Russia, the government along the Volga and on the shores of the Caspian Sea Brackish lakes, from which salt is procured in very considerable quantities Gypsum is also found, and in the Caspian Sea and the Volga delta seal-hunting and fishing are carried on with great success In the fertile part cattle are reared, and there are vineyards which yield a considerable amount of wine The town, which is about 1000 m S E of Moscow, on the left bank of the Volga, 40 m up from the mouth, makes large quantities of calico, and is a great centre of commerce for the Caspian and for trade with Persia and Trans-Caucasia. Imports grain, woollen fabrics, iron, tin, drugs, silk, cotton, and cotton goods Industries dyeing, silk manufacture, shagreen making, extracting seal oil, and soap making Astrakhan fur is obtained from a peculiar variety of sheep from Bokhara and Persia Area of government, 91,327 m Pop 995,000 Pop of town, 113,000

**Asuncion**, the capital of Paraguay in South America, on the left bank of the Parana R, deals in leather, tobacco, sugar, manioc, and maté Regular communication with Buenos Ayres by the Paraná (1240 m). British consul Pop 45,000

**Atacama**, a coast province of Chile, in the north, abounds in silver, gold, copper, and salt. The export of copper, mostly to England,

is worth more than £1,500,000 every year. Area, 28,380 m Pop 60,000

Athabasca, a territory of the N.W. of Canada, extending from British Columbia to the line of 100° W. The northern and southern boundaries are formed by the 60th and 55th parallels of N latitude. It has an area of over 239,500 m, but a population of only about 12,000. A river of the same name rises on the side of Mount Brown, one of the highest peaks of the Rocky Mountains. After forming Lake Athabasca, which is about 230 m. long and from 14 to 30 m wide, it flows out again and proceeds N.W. to join the Mackenzie R. Of a total length of about 600 m nearly 400 are navigable, but the continuity of the navigation is interrupted by impassable rapids for some 60 m.

Athens, the capital of the kingdom of Greece, situated on a small stretch of flat ground N.W. of the Gulf of Ægina, between the rivers Illissos and Kephissos, 4½ m. by rail from its harbour at the Piræus. Of recent years its industries—the spinning of coarse cotton yarns, the manufacture of coarse cotton cloth, and the making of silk and morocco leather—have been increasing in importance. Distance from Alexandria, 500 m, London, 2710, Liverpool, 2635, Glasgow, 2745, Cardiff, 2530. Letters, 4½ days. British vice-consul. Pop 111,500.

Atlanta, the chief city of Georgia in the United States, on a ridge about 1100 ft high, 294 m N.W. of Savannah. It is an important railway centre, being the meeting-place of seven trunk lines, and has an extensive trade in cotton and tobacco, horses, and mules. There are iron foundries and rolling mills, cotton mills, paper mills, and manufacture of agricultural implements. Pop 90,000.

Atlantic Ocean, the ocean which separates the old from the new world, Europe and Africa lying to the E, and North and South America to the W. It opens northwards into the Arctic Ocean, and spreads out southwards to the great Southern Ocean, with an extreme length of some 7000 m along the portion enclosed by land. It has a breadth at the widest part of about 5000 m, and at the narrowest part between Brazil and the coast of Africa of 1600 m. Northwards from the parallel of 60° N the depth is nowhere more than 1000 fathoms, and over 10° further S nowhere greater than 2000 fathoms. Beyond this point there is a central ridge with deeper water on either side, the soundings reaching in some places a depth of between 3000 and 4000 fathoms, and the deepest point of all, just N of the Virgin Islands which lie E from Porto Rico, has an extreme depth of 4561 fathoms. The area of the North Atlantic, taken as stretching down to the equator, is about 14,000,000 m, and that of the South

Atlantic to a line drawn from Cape Horn to the Cape of Good Hope about 10,000,000 m. A number of telegraph cables cross its bed, there being three between Valentia Island in Ireland and Heart's Content at Trinity Bay in Newfoundland, another between Ballinskelligs Bay in Ireland and Tor Bay in Nova Scotia; another between Ballinskelligs Bay and Dover Bay in Nova Scotia; one between Sennen Cove, Cornwall, and Dover Bay, Nova Scotia, two from Brest in France to the Islands of St Pierre and Miquelon, off the coast of Newfoundland, whence they are continued to Boston, two from London by Lisbon, Madeira, and the Cape Verde Islands to Pernambuco, and another from Senegal to Brazil, while others following the coasts connect the principal districts of Africa with Tenerife and Europe, and the principal districts of South America with each other, with the West Indies and with the United States.

Atlas, an irregular series of mountain groups running along the northern portion of Africa, from Cape Nun in Morocco to Cape Bon in Tunis, a distance of some 1400 m. The greatest height, somewhere between 14,000 and 15,000 ft, is near the W end, to the southward of the city of Morocco, and from this point eastwards the elevation steadily falls to a little over 7500 ft in Algeria, about 4500 ft in Tunis, and about 2300 ft in Tripoli. The northern, western, and southern portions of the hills are covered with forests of pine, oak, poplar, and olive; and copper, iron, lead, antimony, and other minerals are said to abound, although they are practically unworked.

Atrato, a river of Colombia flowing northward into the head of the Gulf of Darien. Of a total length of 550 m about 250 are navigable by steamers with a draft of less than 8 ft. It was at one time proposed that a canal of some 50 m should be made from its upper course to the Jurador R which flows to the Pacific, and thus effect communication between the Atlantic and Pacific Oceans, but the scheme was abandoned in favour of the first Panama Canal. The river brings down considerable quantities of gold dust.

Attock, a town on the left bank of the Indus, Punjab, India, 42 m S.E. of Peshawar, and about 74 m by rail or road from the mouth of the Khaibar Pass. It is the highest point on the Indus (940 m up) to which steamboats go, but vessels of 40 to 50 tons can proceed up the Cabul R for a distance of about 52 m. Pop about 4000.

Aube, a department in the Seine basin, near the centre of France; the N.W. bleak and sterile, the N.E. pasture land, and the S. fertile and wooded, has marble, iron, and lithographic stone, and produces cotton and woollen

fabrics, hosiery, and faience Area, 2317 m. Pop 246,500.

Auckland, a town, and a provincial district, in the northern part of the North Island of New Zealand. The district is about 400 m long by 200 m wide at the broadest part, and covers more than half of the North Island. The whole region abounds in timber, especially the kauri pine, of which the gum, both recent and dug up fossil, is very valuable, and is exported in large quantities. A considerable amount of New Zealand flax is also grown and manufactured. The principal minerals are gold, coal, iron, copper, and tin. The town is the largest city in the colony, and was till 1865 the seat of government. Situated on the southern shore of Waitemata Inlet it is a very important seaport, and has one of the finest harbours in New Zealand, there being sufficient depth of water for the largest vessel afloat. The lowest depth is 36 ft. at low water of stream tides, while the working ship channel has also an average depth of 36 ft. At the wharves there is a depth of from 25 to 28 ft., and there are two dry docks, of which the larger has a length of 525 ft., a width of 100 ft., and a depth on the sill of 33 ft. There is railway communication in different directions, and some of the lines are connected with the coal-fields. The town itself stands on a narrow peninsula some 7 m wide between the Waitemata Inlet and the much shallower harbour of Manukau, with which there is railway communication. Imports general goods, hardware, &c., exports gold, timber, kauri gum, flax, wool, hides, tallow, frozen meat, fish, fruit, &c. Regular communication from London by Wellington and also from Melbourne, Sydney, and San Francisco. Distance from Wellington, 309 m, from Melbourne, 1700, from Sydney, 1300, from San Francisco, 6000, from Fiji, 1200, from Glasgow, 12,200, and from Cardiff, 12,000. Time for noon at Greenwich, 11 40 P.M. Letters, *via* Suez, 39 days, *via* San Francisco, 30 days. Area of district, 25,746 m. Pop of district (excluding natives), 176,000. Pop of town, 67,500.

Aude, a coast department of France on the W shore of the Gulf of Lyons. The southern part occupied by the spurs of the Pyrenees, and the northern part by those of the Cevennes, with the Canal du Midi marking the division between. Noted for the fine quality of its wool, and has also iron, copper, lead, tin, manganese, and marble. Woollen and silk manufactures. Area, 2438 m. Pop 314,000.

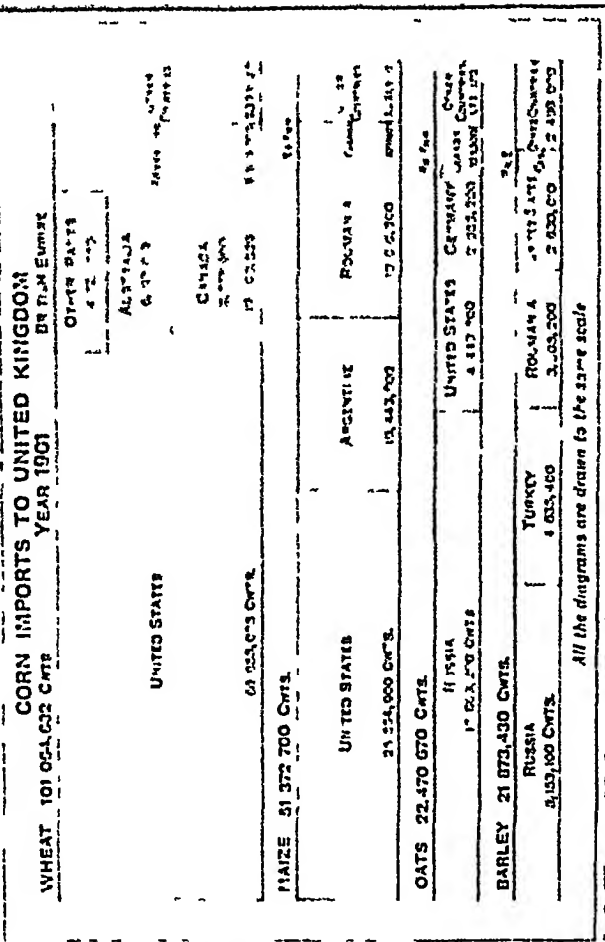
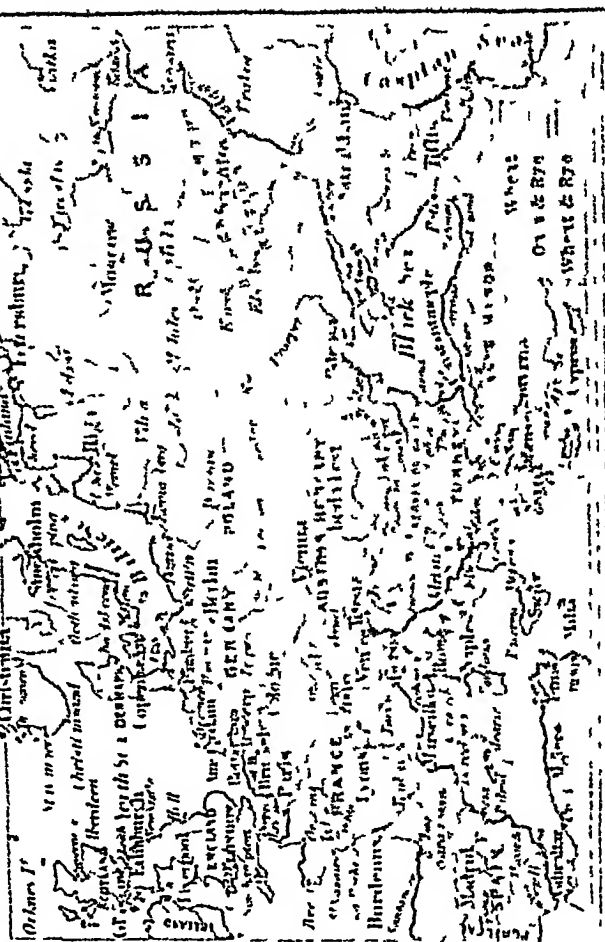
Augsburg, a city of Bavaria, Germany, between the rivers Wertach and Lech, 37 m N.W. of Munich. Its present position as a manufacturing town is chiefly due to the excellent power obtained from the Lech, which has here a very rapid flow. Manufactures cotton and

woollen fabrics, beer, paper, tobacco, and machinery, and is still an important centre of printing and the book trade. It is also a transit centre for Italy and southern Germany, being connected by rail with Nuremberg, Leipzig, Switzerland, and Munich. Pop 89,500.

Augusta, a town in Georgia, United States, the highest point to which navigation can be carried on up the Savannah R. It is one of the great seats of cotton manufacture in the S., water-power for the mills being supplied by a canal connected with the Savannah. Pop 39,500.

Australasia, *i.e.* Southern Asia, is the name given to Australia and the adjacent islands—Tasmania, New Guinea and the adjoining groups, New Hebrides, New Caledonia, New Zealand, the Solomon Islands, and Fiji. Some writers extend the term to all the islands of the Malay Archipelago and the Pacific. In the United Kingdom the name is loosely used as referring only to our own colonies in that region.

Australia.—*Surface and Size*—Australia is a great island-continent lying between 10° and 40° S and between 113° and 153½° E, about 26 times the size of the United Kingdom, almost equal to the United States of America (without Alaska), and four-fifths of the size of Europe. It is bounded N by Torres Strait (90 m) separating it from New Guinea and the island-crowded water between the Pacific and Indian Oceans, E by the South Pacific, and S.W. and N.W. by the Indian Ocean. On the S it is separated from Tasmania by Bass Strait (140 m). The coast line (less than 9000 m) is short in comparison with the area, the indentations being far from numerous, and but few of them of great commercial importance. The sea near the shore all round is comparatively shallow, and off the northern half of the east coast, at a distance of from 10 to 150 m, the Great Barrier Reef stretches for over 1200 m. The surface of the great mass of coral is just awash at low water, and though there are a number of passages through it, few are available for navigation. The chief are the Bligh Entrance, 9° 20' S, the Olinda Entrance, 11° 20' S, the Raime Island Entrance, 11° 40' S, and Flinders Passage, 19° S—the last probably the best. The sea inside is calm, but the inner route requires great care in navigation. There are pearls, pearl shell, and trepangs. The length of the continent from E to W is about 2300 m, the extreme width from N. to S about 2000 m, the mean height above sea level probably about 900 ft., and the area about 3,000,000 m, of which about 1,100,000 is inter-tropical and 1,900,000 without the tropics. Physically, Australia somewhat resembles Africa or Ireland, there being a narrow coastal strip, a more or less broken circle of hills, and a



CORN IMPORTS TO UNITED KINGDOM DE FROM EUROPE YEAR 1901			
WHEAT 101 064,632 Cwts	UNITED STATES 21 372 700 Cwts	ARGENTINE 19 143 700	RUSSIA 17 06,300
	60 252,000 Cwts		
MAIZE 51 372 700 Cwts	UNITED STATES 21 372 700 Cwts	ARGENTINE 19 143 700	RUSSIA 17 06,300
	60 252,000 Cwts		
OATS 22,470 670 Cwts	UNITED STATES 21 372 700 Cwts	ARGENTINE 19 143 700	RUSSIA 17 06,300
	60 252,000 Cwts		
BARLEY 21 072,430 Cwts	UNITED STATES 21 372 700 Cwts	ARGENTINE 19 143 700	RUSSIA 17 06,300
	60 252,000 Cwts		

All the diagrams are drawn to the same scale

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central plateau The Australian tableland is low, and the mountains are most marked along the eastern side, where they extend the whole way from Cape York to Melbourne in the Great Dividing Range, known in different parts as the Gregory Range, the Craig Range, the New England Range, the Liverpool Range, the Blue Mountains, the Australian Alps, and the Grampians The highest point in the continent is Mount Townsend (7350 ft) in the Australian Alps At different points across the centre of the country from N to S are the detached Coast, Macdonnell, and Flinders, Ranges Along the S W is the Darling Range, and minor ranges occupy the north-western districts Australia is the only continent without an active volcano, but in Victoria there are traces of comparatively recent volcanic action On both sides of the Dividing Range are tablelands with an average elevation of 2500 ft, dropping on the one side to the coastal strip, and on the other sloping to the great central Upland Plains, with an average elevation of some 500 ft These are mostly barren, passing indeed along 20° S and between 23° and 30° S into the Great Sandy Desert and the Victoria Desert—but in wet seasons considerable areas produce vegetation, and portions on the E abound in the grey stunted shrub known as salt-bush, on which sheep thrive quite as well as on ordinary pasture

*Climate*—The climate generally is warm and dry, the mean temperature of July, which is the coldest month, varying from 64° to 80° Fahr in the inter-tropical districts, and from 40° to 64° in the parts outside the tropics In some districts the rain is torrential, and often there are prolonged droughts most disastrous to stock, that of 1884 having caused the loss of 10,000,000 sheep from thirst For climate and productions the Dividing Range is of the utmost importance, as it lies directly in the path of the S E trades, and therefore arrests and drains of moisture all the rain-bearing clouds that are carried against the land, with the result that the coast strip on the E side receives too much rain, while the centre and W have large areas practically rainless The heaviest rainfall is in the N—the tropical region of greatest evaporation—and comes in summer between November and April, while in the S, outside the tropics, the rainfall is mostly in winter, between May and October The average amount, of course, varies, but the whole E coast strip, and the promontory of Arnhem Land in the N of South Australia, have from 40 to 60 in Extending inward from this is a zone of 300 to 600 m, where there is a fall of from 10 to 40 in, and this is the case also along the hilly districts of the W. coast, elsewhere the fall is less than 10 in. The interior is, as might be expected, a region of inland drainage and salt lakes, of which the

chief are Eyre, Torrens, Gairdner, Amadeus, and Frome in South Australia, and Moore, Austin, Barlee and Cowan in Western Australia The rivers in the N and N.E. coast strip are short, rapid, subject to violent floods, and bring down great quantities of mud, so that their mouths are obstructed by bars Here the only streams of importance are the Victoria and Roper in the northern territory of South Australia, the Flinders, Burdekin, Fitzroy, and Brisbane in Queensland, and the Hunter in New South Wales The first two are navigable for some distance up, as are also the last three, but not so far. In the S E corner things are different, and this region is drained by the only river system worthy of the continent—that of the Murray-Murrumbidgee, which streams, with their tributaries the Darling and Lachlan, drain the great Lowland Plain, an area of some 500,000 m (including the greater part of Victoria and New South Wales and a small part of South Australia) and have a total length to the source of the Darling of 2345 m Navigation can be carried on by small vessels for about eight months of the year as far as Albury, a distance of about 1800 m, on the Murrumbidgee as far as Wagga Wagga, and on the Darling to Bourke The drawbacks are that there is no proper sea outlet—so that goods have to be taken in, or discharged, at Moigan, which is connected with Adelaide by a railway 105 m long—and that in times of drought communication becomes impossible Much, however, might be done here, and elsewhere, by using the streams for irrigation, and already in different parts of the Murray basin utterly barren soil has by this means been so changed as to produce valuable crops of fruit, vegetables, &c There is also a very large supply of underground water in various parts of the continent, and this is now being tapped in many different districts by means of artesian wells A thorough system of irrigation would convert large desert tracts at present quite worthless into good agricultural ground, and would enable Australia to support without difficulty a population probably ten times as large as the present one

*Productions and Resources*—The vegetable productions of Australia may be divided into (1) tropical and sub-tropical forest and crops, in a belt 100 to 200 m wide, extending all round the N coast, and down the E coast in Queensland as far as Rockhampton; (2) forests and crops of the temperate zone, in a belt all along the E coast and round the S E corner, (3) mountain forests of the temperate zone, all along the Dividing Range in the same district—the tableland on both sides with open forest and excellent pasture, (4) evergreen bushes without trees, in the S W corner of Western Australia and on both sides of Spencer Gulf,

with a finger-like projection running northward, (5) pasture and grazing scrub on the whole of the rest of the country except the desert portions. Some of the trees are of considerable economic value, *eg* the eucalypti—blue gum, red gum, stringy bark, iron bark, &c., acacias, the cabbage palm, karri, and jarrah of Western Australia (used for street paving), kangaroo grass (excellent feeding), and salt-bush, which needs almost no water, grows on saline soil, and is greedily devoured by sheep, animals feeding on it yielding heavy fleeces of very fine wool. In its pasture Australia has meanwhile one of its great sources of wealth, soil, climate, and herbage being alike admirably suited for the sustenance of sheep and cattle. Between 1820 and 1890 the number of sheep increased from about 250,000 to about 125,000,000, and though there has since been a slight falling off, due to losses through drought and to increased attention given to cattle-rearing, Australia is still by far the greatest wool-producing country in the world, the annual output being over 500,000,000 lbs, or five-sevenths of that of Argentina and Russia (the next two in order) together, nearly as much as the United States, the United Kingdom, and France (the next three) together, and nearly double the amount turned out by Spain, British South Africa, and Uruguay (the next three) together. If New Zealand were included the figures would be considerably increased. Australian merino wool is longer in the staple and heavier than that produced anywhere else. About 65 per cent. goes to the United Kingdom, about 14 per cent. to France, and about 9 per cent. each to Germany and Belgium. Cattle-rearing has developed greatly within the last forty years (the number of animals being now about 10,000,000), principally through the spread of the preserved meat trade, and still more since it became possible to send chilled and frozen meat to the European market. There are about 2,000,000 horses in the country, and 1,500,000 pigs. Rabbits have become so numerous as to be in some districts a pest, and large sections have had in many parts to be protected from their ravages by rabbit-proof fencing. The chief crops are wheat (Australia standing twelfth in order among the great wheat-producing centres of the world, a position likely to be improved very soon), hay, potatoes, maize, oats, and barley, but as the area under cultivation is altogether about 9,000,000 acres, there is but a small surplus of grain for export. Grapes for wine, bananas and other fruits, sugar-cane, cotton, and tobacco are also grown in increasing quantities. If the vines were chosen, planted, and treated, as in the best Gironde districts, Australian clarets would rival those of France. Australia is very rich in minerals, gold, silver, copper, tin, coal, iron, manganese, anti-

mony, cinnabar, rubies, and sapphires. In gold and silver Australia takes the third place, being surpassed in gold production by South Africa and the United States, and in silver by the United States and Mexico. The annual value of the gold now stands at over £15,000,000 annually, and the total production in the last fifty years has been about £350,000,000. The iron is, unfortunately, not found near coal, and as yet it does not pay to work it. The coal is only at the beginning of its development.

*Commerce* — The natural facilities of the country for the production of wool, grain, and provisions, and the enormous value of the gold, silver, copper, and tin, mines, have given it great prosperity, and brought its commerce to a very large figure in proportion to its population—the largest proportion in the world, almost double that of the United Kingdom. Of a total external trade of at present nearly £100,000,000, 63 per cent. is with the United Kingdom, nearly 10 per cent. with other British colonies, and 25 per cent. with other countries, about one-fifth of the imports of the last coming from the United States, and one-tenth from Germany, while of the exports one-eighth went to the United States, about the same to France and New Caledonia, less than one-eighth to Germany, and nearly the same quantity to Belgium. American trade has recently been gaining at the expense of Germany, and it is curious to find the German consuls giving to their countrymen the same advice that our commercial men so often get at home—viz, to have travelling and permanent agents to push business earnestly and persistently, to take pains to meet the wishes of Australian buyers, to advertise extensively, spare no expense, and be continually singing the praises of their goods. The principal articles sent to the United States are coal, fibres, skins, sausage casings, tin, and wool, the principal articles received from the Americans (many of which could be quite as well supplied by the mother country) are agricultural implements, machinery, rails, tools, and other iron and steel manufactures, tobacco, wood and wooden goods, petroleum, paper and manufactures thereof, cars, cycles, and carriages, chemicals, drugs, &c., cotton manufactures, scientific instruments, and clocks and watches. Australia has a protective tariff, discriminative as to articles that do not compete with native products or industries. For further details as to products, &c., see the separate states of the Commonwealth.

*Communications* — Australia has regular communication with all the countries of the world, and distances will be found under the leading ports. The shortest sea distance is about 11,000 m, and mails take 30 to 34 days to reach coast places. By telegraph cable it is connected on the N by Port Darwin with

Java, and so with London ; and a new cable has just been laid from Sydney, by New Zealand, Norfolk Island, Fiji, and Fanning Island, to Vancouver, at a total cost of about £2,000,000, of which the mother country and Canada have defrayed five-ninths, New Zealand one-eighth, and Queensland, New South Wales and Victoria the remainder equally among them. For internal communication the long coast line and the absence of navigable rivers have rendered it necessary that the railways should connect interior areas of production and coast points of distribution. While, however, the coast trade takes up over 60 per cent of the shipping, railway systems have by no means kept pace, and there are, so far, fewer than 16,000 m in the continent, though this gives 1 m to every 300 inhabitants, a proportion which probably no other country can boast of. One line, starting at Adelaide, crosses the Grampians to Melbourne, passes thence north-eastward to Albury and down to Sydney, then along the coast to Newcastle, on, farther inland, to Brisbane. Other lines run from Brisbane into the interior, and farther N ; and from Rockhampton and Townsville into the interior. From Adelaide a second line runs northward, and is intended ultimately to cross the centre of the continent to Port Darwin (see Adelaide). Other suggested trans-continental lines are, from Kalgoorlie to this line at the top of Spencer Gulf, from this line through the centre of southern Queensland to meet the present line from Townsville into the interior, and from the present line at Bourke to meet the Port Darwin line far north at Daly Waters, with a branch to Normanton, and to the present inland line from Brisbane. In Western Australia lines pass from Perth northward to Geraldton and southward to Albany, while branches pass from Perth southward near the coast, and from near Geraldton inland. A great drawback to convenience and ease of transport is that the lines have been constructed on three different gauges, varying from  $3\frac{1}{2}$  to  $5\frac{1}{2}$  ft. Outlying districts will probably by-and-by be supplied with light narrow-gauge lines. Almost the whole of the railways are owned and controlled by the State. For traffic in the interior camels have been introduced and found very suitable, and they have even been trained to draw waggons.

*Government*—Australia is unlike any of the other continents, as it is not parcelled out among different nations, but forms an integral part of the British Empire. Formerly it was divided into the separate colonies of Victoria, New South Wales, Queensland, South Australia, Western Australia, and Tasmania, but on 1st January, 1901, these were all united into the Commonwealth of Australia. A Governor-General represents the King, and the legislature consists of a Senate and a

House of Representatives. Other states may be admitted, and a federal capital is to be formed in New South Wales, not less than 100 m from Sydney, and its site to be federal territory. Postage, 1d per  $\frac{1}{4}$  oz, postcards, 1d ; telegrams *via* Turkey 2s 10d a word, other routes, 3s. The commonwealth flag has a dark blue ground with the crosses of the Union Jack in the upper corner, underneath that a large six-pointed star, and on the outer part five stars arranged in the form of the Southern Cross. Pop about 4,000,000.

*Austria-Hungary—Surface and Size*—Austria-Hungary is a great empire of central Europe, the largest of all European countries except Russia. It lies between  $42^{\circ}$  and  $51^{\circ}$  N, and between  $9^{\circ}$  and  $27^{\circ}$  E. It is bounded N. by Germany and Russia ; E. by Russia and Roumania, S. by Roumania, Servia, and Montenegro, and W. by Germany, Switzerland, and Italy. No other European country has a surface so varied, and in consequence any general description of its physical features is difficult. Roughly speaking, three-fourths may be said to be mountainous, the S.W. being occupied by the heights of the Carnic, Julian, and Dinaric Alps (highest point Ortler Spitz, 12,814 ft), the N.E. and S.E. by the great curve of the Carpathians and the Transylvanian Alps (Gerlsdorfer Spitze, 8517 ft ; average elevation, 6000 ft), stretching for nearly 900 m from the Danube, a little to the E. of Vienna, eastward, south-eastward, and then westward, along the boundary with Roumania back to the Danube again, at the Iron Gates near Orsova. The N.W. has the Bohemian plateau girt on the N.E. by the Riesengebirge (boundary with Prussia), on the N.W. by the Erzgebirge (boundary with Saxony), on the S.W. by the Bohmerwald (boundary with Bavaria), and on the S.E. by the Moravian Mountains. The Styrian Alps and Leitha Hills passing north-eastward to near Vienna form a connecting link between the Alps proper and the Carpathians. The flat parts are Lower Austria about Vienna, the great plains of Hungary with a total area of some 25,000 m, and Galicia to the N.E. of the Carpathians. The drainage is carried off by the Danube (with its great tributaries the Drave, Theiss, and Save) and Dniester flowing to the Black Sea, the Vistula to the Baltic, the Elbe to the North Sea, and the Adige to the Adriatic. With such variety of surface there is naturally also great variety of climate, from the perpetual snow of the Alps and Carpathians to the mild winters of the S. along the Mediterranean. The eastern portion of the country is influenced by continental conditions, and has warm summers and cold winters, but in the W. the extremes are modified by greater nearness to the sea. The mean rainfall of the different parts varies from 18 in. (Prague and Hungarian

plains) to over 60 m (Adriatic coast) The mean temperature varies from 41° Fahr in the N.E. to 58° in the S W The total area of the empire is 240,942 m, the greatest length from E to W about 820 m, and the breadth of the compact portion from N to S about 420 m

*Government, &c*—Austria-Hungary is made up of the great compact portion of Hungary in the S E and centre, with Galicia and Bukovina beyond the Carpathians to the N E, Moravia, Upper and Lower Austria, Styria, Carinthia, Carniola, Istria, Croatia, and Slavonia, on the N W, W, S W, Bohemia standing out as a projection north-westward from Moravia, Salzburg and the Tyrol, projecting westward from Austria, and Styria and Carinthia and Dalmatia, extending down the Adriatic coast as far as Montenegro Slavonia, Croatia and Dalmatia form adjuncts of Hungary, all the rest is Austria proper Between Dalmatia and Slavonia are Bosnia and Herzegovina, which nominally belong to Turkey, but are under the control and administration of Austria-Hungary The head of the State is the monarch, Emperor of Austria and King of Hungary, and the common ministries are controlled in action and expenditure relating to matters common to both members of the alliance (chiefly foreign, naval, and military affairs) by two Delegations chosen annually, twenty members from each of the Upper Houses and forty members from each of the Lower Houses The Austrian parliament (Reichsrath) consists of two houses, and the Hungarian parliament (Reichstag) has an upper House of Magnates, and a House of Representatives The total population is 41,358,000

*Communications*—For internal communication the country is covered with a network of railways with an aggregate mileage of over 22,000 Vienna is one of the great railway centres of Europe The lines mostly belong to the State, and on them was first introduced the zone system of fares, increase of charge taking place only after the increase in distance of a certain number of miles The Alps form an obstruction on the one side, but have been pierced with tunnels (*see* Alps), and the Carpathians on the other The total mileage of the navigable waterways is over 7000 m, of which some 2750 are navigable by steamers and 3640 by barges, the total traffic amounting probably to over 8,000,000 tons Of the waterways the most important are, of course, the Danube and its tributaries, the Theiss being navigable to Tokay, the Drave to the mouth of the Mur (itself navigable to Gratz), the Save to the mouth of the Kulpa, and by the Moldau connection is made from Prague to the Elbe, and thence to the North Sea The chief canals are the Ferencz connecting the Danube and Theiss, and the cutting for the Danube itself at the Iron Gates, but it is proposed in the sixteen

years following 1901 to expend £11,000,000 in forming a connection between the Danube and the Oder, a canal from the Lanz on the Danube 80 m to Budweis on the Moldau, a canal from the Danube-Oder connection near Prerau to Pardubitz on the Upper Elbe, and canalising the upper part of that river, and a canal joining the Danube-Oder connection with the Vistula and the Dniester Manufacturers complain bitterly of the lack of cheap inland navigation, and this is of the utmost importance for Austria-Hungarian trade, considering the difficulties it has to contend with in reaching outlets to other countries There is a coast line of over 1000 m along the Adriatic, but it is not of so much use as it might be, in consequence of the hilly nature of the country behind it, while all the water-way outlets elsewhere, of which the Danube is the chief, are hampered by the mouths of the rivers being in other countries Notwithstanding these disadvantages there is a considerable sea-borne trade, the tonnage of vessels (including coasters) belonging to the empire being about 260,000 tons

*Resources and Productions*—The natural wealth and productive power of the empire is so great and varied that it will be best dealt with in connection with the various provinces, &c., but, meanwhile, it may be noted that the forests of Bohemia and Moravia produce pine, beech, and larch, those of Hungary, Galicia, and Transylvania oak, beech, and elm Hungary and Galicia are largely natural meadow land, and are famous for wheat and flour, and in Austria there are also crops of oats and rye, while Hungary has maize, and both have beet, hemp, rape, flax, hops, and tobacco Horses, cattle, pigs, mules, donkeys, and sheep are reared in large numbers, and in the S silk-worms The agricultural wealth is mostly in Hungary, while, on the other hand, the mineral wealth is greater in Austria Coal, lignite, and graphite, mostly in the N W; salt and zinc in E and W, silver, iron, lead, W and N W, quicksilver and copper in W., and many other minerals are worked In Hungary coal, lignite, salt, silver, gold, iron, copper, and lead are to be found Austria-Hungary is meanwhile the fourth coal-producing country in the world

*Manufactures*—The chief of these are the making of sugar (the export of which to the United Kingdom is valued at over £3,250,000), the weaving of woollen cloth, linen, cotton, and jute, the production of iron; the manufacture of iron and steel, of glass, porcelain, furniture, wooden and bone ware, paper, and beer, the milling of flour, and the preparation of agricultural produce Of the population of Austria (26,151,000) more than half are engaged in agricultural pursuits, forestry, &c., about one-twelfth in clothing and other in-

dresses, about one-eighth in trade, and about one-seventh in connection with mining and minerals. In Hun. cov. of 19,207,000 over 11,000,000 are engaged in agriculture and forestry, and Austria has a daily labourer, and chiefly less than elsewhere, are employed in general industries. Of the farmers nearly 2,000,000 own the land they work.

*Commerce and Trade.*—The growth and prosperity of Austrian commerce is considerably hampered by the obstacles already noted, but the trade is nevertheless large, the total imports of articles intended for home consumption being about £70,000,000, and exports of articles of domestic produce about £50,000,000 annually. Of the imports over 42 per cent are raw materials for agricultural and industrial purposes, over 13 per cent semi-manufactured merchandise, and nearly 25 per cent manufactured in re-export; while of the exports over 42 per cent are raw materials, over 16 per cent semi-manufactured merchandise, and nearly 43 per cent manufactured merchandise. Of the imports about three-eighths come from Germany, the United Kingdom and its colonies with five-thirty-seconds coming next, after which follow the United States, Italy, Russia, France, and Switzerland. Of the exports more than half go to Germany, the United Kingdom and its colonies following with nearly one-ninth, and Italy, Russia, Switzerland, Roumania, Turkey, and France succeeding in order. The value of the exports from the United Kingdom to Austria-Hungary is nearly £3,000,000 a year, and of the imports from the empire to the United Kingdom £1,200,000. The principal imports received by Austria-Hungary are coal and coke, wool (raw, yarn, and manufactured), cotton (raw, yarn, and manufactured), silk and silk manufactures, tobacco, machinery, leather and leather wares, raw hides and skins; flax, hemp, and jute, coffee, boots and printed matter, iron and steel (manufactured and unmanufactured), copper, animals (mostly cattle), rice, dye-stuffs, maize, manufactures of wood and bone, and mineral oil. Of the exports by far the chief is wood and wooden goods, and then come coal (chiefly lignite), sugar, animals (largely horses), eggs, wool (raw and manufactured), barley, wheat and flour, malt, glass ware, leather manufactures, jewellery and fancy wares, raw hides and skins, linen (yarn and manufactured), silk and silk manufactures, paper, iron and steel wares, hops, ready-made clothing, feathers, cotton (raw and manufactured), pulse, butter, and margarine. The chief articles sent to Austria-Hungary from the United Kingdom are cottons and cotton yarn, coal, woollens and woollen yarn, raw wool, machinery, metals (iron, copper, tin, &c.), paraffin wax, stationery (other than paper), &c.; and there is a re-export of foreign and colonial merchandise—

coffee, leather, ornamental feathers, croutcheau, shells, spices, fish (cured and salted), &c. The chief articles received from Austria-Hungary are wheat and flour, dyeing and tanning substances, brown oak timber, barley, sugar, mineral waters, drugs, and hemp. There is a stiff protective tariff. Commercial and technical training is not developed as it is in Germany, but Hungary has begun to give the subject attention, and Austria will probably follow. There are British consuls general at Vienna and Budapest, consuls at the same places and at Prague, vice-consuls at Linn, Innsbruck, and Trieste, and a consular agent at Liez. Letter postage from the United Kingdom, 2½ p. per ½ oz., postcards, 1d., parcels, *ad* Hamburg, not over 3 lb., 1s. 6d., between 3 and 7, 2s., between 7 and 11, 2s. 6d., and Holland or Belgium, the corresponding rates are ½d. more in each case; telegrams, 3d. per word; four mails to and from London daily.

*Money, &c.*—The standard is gold, but the monetary unit for business quotations is the gulden, worth 1s. 8d., or the krone=10d. Bronze coins are the single heller (one-tenth of a penny), and the two-heller (one-fifth of a penny)=old 1 reuzer; nickel, 10 heller=1d., 20 heller=2d.; silver, the krone=100 heller=10s.; gold, the ducat=8s., the 20 kronen piece=16s. 8d., 21 kronen=12 gulden=20s. The metric system of weights and measures is now compulsory. Old weights and measures are the centner=100 pfund=123½ lb., eimer=119 gal.; fuder=32 eimers; joch=1.43 ac.; metzen=17 bush, muth=30 metzen, fuss=12½ in., meile=6897 yds., a klafter of wood=120 cub. ft.; a Vienna ell=30.6 in., a Trieste wool ell=26.6 in., and a silk ell=25.2 in.

The Austria-Hungarian mercantile flag has a top bar of red, a centre bar of white, and a bottom bar half red (next the staff) and half green; across the white bar are two shields with yellow borders, and yellow crowns in the upper red bar; one shield has red and white bars, the other (the outer) one half red and white bars, the other red with two white crosses and a green base.

*Autun*, a town in the department of Saône-et-Loire, France, 44 m. by rail S.W. of Dijon, and 31 m. N.W. of Châlon. Manufactures carpets and velvet and a particular kind of thick cloth for horse wrappings. Has a trade in horses, corn, and timber. Pop. 16,000.

*Aux Cayes*, a small seaport in Hayti, West Indies, 100 m. W. by S. of Port au Prince; anchorage dangerous in winter; imports cotton, wine, oil, and general goods; exports coffee and logwood. British vice-consul. Pop. 25,000.

*Aveyron*, a department in central France with a river of the same name passing through

it from E. to W.. coal, iron, lead, and other ores; slate and marble; and about a third part of the land that is unfitted for agriculture has excellent pasture, on which cattle, goats, sheep, and swine thrive in considerable numbers. Laguiole and Roquefort cheese sent out in considerable quantities. There are manufactures of cotton and woollen cloths, and of leather. Area, 3376 m. Pop 382,500

**Avignon**, the chief town of the department of Vaucluse, S. France, on the left bank of the Rhone, 75 m N.W. of Marseilles. There are manufactures of silk, leather, and iron; and the surrounding district is famous for its garden produce, fruit, wine, honey, olives, oranges, and lemons. Pop 47,000

**Avola**, a town on the E. coast of Sicily, 13 m. S.W. of Syracuse, with an open roadstead where vessels anchor in 5 to 7 fathoms of water about half a mile from the shore. In this neighbourhood is produced the famous honey of Hybla, and there is also tunny fishing and the manufacture of sugar. Exports wine, corn, almonds, oil, honey, and locust beans. Pop. 12,500

**Ayr**, a town and county in the S.W. of Scotland, on the E. side of the lower part of the Firth of Clyde. The county is famous for early potatoes and for dairy farming (the cattle being particularly valuable for the amount and excellence of their milk); and the manufacture of cheese is very considerable. There are large coalfields, iron works, deposits of fireclay, limestone, and honestone. Manufactures carried on on a large scale are carpet weaving, making of woven bonnets, tweeds, cotton goods, lace curtains, dynamite and other chemicals, leather, boots and shoes, and agricultural implements, while at a number of points on the coast there are valuable fisheries. The town, at the mouth of the river of the same name, 404 m. S.S.W. of Glasgow, exports coal. The harbour has a wet dock, where vessels drawing from 15 to 20 ft. of water can be kept afloat, and the tidal portion in the mouth of the river has a depth of from 21 to 23 ft. at high water of ordinary tides. The chief imports are grain and timber. Industries: manufacture of carpets and other woollen fabrics, of lace, and sawn timber. Area of county, 724,523 acres. Pop 254,468. Pop. of town, 29,101.

**Azerbaijan**, a mountainous province in the N.W. of Persia, including part of Armenia. Fertile valleys yield large crops of grain, cotton, hemp, madder, tobacco, and saffron, so as to make this one of the richest districts of Persia; but the absence of roads (these do not exist in even the most elementary stage) forms a complete barrier to the development of its resources and only by improvement in inland communication can our trade be benefited, as import transit through Russia is forbidden us. The chief town, Tabriz (180,000), is to be con-

nected with the Russian Trans-Caucasus railway by a good road, and perhaps by rail—the latter route via Julfa (frontier) to Erivan. Firms must have a thorough knowledge of the country, the language, and the proper method of dealing with the natives, otherwise success is hopeless. From the United Kingdom the country receives cottons, prints, woollen and linen cloth, drugs, groceries, sewing cotton, and glass ware, and from India tea and dyes. The rest of the trade is mainly with Russia (prints, metal, petroleum, stationery, sugar, and drugs); Germany (metal, haberdashery, silk, and velvet); Austria-Hungary (metal, stationery, haberdashery, and matches); and France (silk, satin, velvet, and ribbons). Sulphur, saltpetre, salt, lead, iron, and copper are found: camels, horses, cattle, and sheep are reared in considerable numbers: and there are manufactures of velvets, silks, carpets (at Tabriz especially), and leather. The chief exports (which go in the first place to Russia and Turkey, but in many cases only in transit) are almonds and pistachios, raisins, grapes, skins and leather, carpets, Kerman shawls, and native silk. Money, 10 kran = 1 toman = £1, but exact value varies with rate of exchange. Area about 40,000 m. Pop. estimated at 2,000,000

**Azores**, three groups of hill islands (1570 to 7460 ft.) belonging to Portugal, in the Atlantic, extending over a length of about 400 m. between 37° and 40° N and 25° and 31° W. The centre is about 800 m. W. by S. of Lisbon, 1200 S.W. of the Lizard, 1400 from Liverpool, 1500 from London. 1900 E.S.E. of Halifax, and 2300 from New York. The largest island is São Miguel (41 by 24 m.), and the smallest Corvo (4½ by 3 m.); the total area is about 800 m. The eastern group consists of Santa Maria, São Miguel, and the Formigas Rocks; the central of Terceira, Graciosa, São Jorge, Pico and Faial; and the western of Flores and Corvo. Products, wine, pine-apples, oranges, bananas, grain, pulse, tobacco, and sweet potatoes: industries, making of butter and cheese and distilling; exports productions as above, especially oranges, and also pork and beef; imports textiles, hardware, general goods, tar, timber, oil fish, salt, rum, coffee, sugar, and tea. Regular communication with London and Lisbon. Postage, 2d. per ½ oz. postcards, 1d.; telegrams, 9d. a word. British consul at St. Michael. Pop. 260,000.

**Azov, Sea of**, a shallow sea of S. Europe, entirely surrounded by Russia, communicating with the Black Sea at Kerch by the Strait of Yenikale, 25 m. long, 4 m. wide at the narrowest part, and now dredged to a depth of 22 ft. Another entrance has been cut across the Isthmus of Perekop. The length of the sea from N.E. to S.W. is about 235 m., the greatest breadth 110 m., the depth from 3 to

52 ft, and the area about 14,500 m. The only very large river entering it is the Don at the N E. Notwithstanding the lack of depth the sea is very important for Russian

trade, giving outlet for the corn, wool, linseed, iron, copper, &c, of South Russia. Ice renders navigation impossible from the beginning of December to the end of March.

## B

**Bab-el-Mandeb**, the strait uniting the Indian Ocean and the Red Sea, 14 m in width, but divided by the island of Perim into two channels, of which only that on the E, the Little Strait, is navigable.

**Baccarat**, a town in the department of Meurthe-et-Moselle, in N E France, on the R Meurthe. Has the most important manufactory of plate glass in the country. Pop 7000.

**Bacup**, a cotton manufacturing town of Lancashire, 19 m by rail N E of Manchester. Has also turkey-red dyeing, brass and iron foundries, machinery making, coal, and stone quarries. Pop 22,505.

**Badajoz**, a frontier town of Spain, capital of the province of the same name, on the left bank of the Guadiana, 174 m by rail E of Lisbon, and 315 from Madrid. Manufactures soap, coarse woollens, leather, and pottery, and has a large trade in cattle and hides. Area of province, 8686 m. Pop 491,000. Pop of town, 25,000.

**Baden**, a grand-duchy in the extreme S W. of Germany, between Wurtemberg and the Rhine. Of the surface about five-sixths along the E is hilly—the Odenwald in the N, and the Schwartzwald or Black Forest in the S—and the remaining one-sixth in the W. is part of the Rhine valley. A small portion in the extreme S E is drained by the Danube, but all the rest lies in the basin of the Rhine with its tributaries the Main, Neckar, Murg, and Kinzig. The last two are used for timber-floating, and the others are all navigable. Mannheim, near the mouth of the Neckar, being a very important river port. The vertical range of different districts extends over some 4500 ft, so that the temperature and rainfall vary considerably, but the mean of the former for Heidelberg and Mannheim is 51° Fahr, and the latter ranges from 39 in in the N to nearly 80 in the Black Forest. The products also vary greatly. The Rhine district is pre-eminently fertile—one of the most fruitful parts of Europe, producing grain, tobacco, hemp, rape, chicory, and hops. Vines thrive on the hill slopes along the Rhine and Main, and several districts are noted for wine, while in various places, but especially in the Black Forest, there are forests of pine, oak, beech, birch, and ash. The principal minerals are limestone, gypsum, salt, and soda, and there are many mineral springs. The leading manufactures are cottons, ribbons, paper, hats, brushes, machinery, chemicals, tobacco, beer,

gold and silver jewellery (Pforzheim), and the straw plaiting, wooden goods, clocks, and musical instruments, for which the Black Forest is famous all over the world. The leading export besides these is wine. The chief town is Baden, or Baden Baden, in the Black Forest, 23 m by rail S W. of Carlsruhe. Letters, 20 hours. Area of duchy, 5823 m. Pop 1,868,000. Pop of town, 16,000.

**Baffin Sea**, in North America, between Greenland and the islands N E of Hudson Bay. About 1800 m long with an average breadth of 280 m, and from 200 to 1000 fathoms in depth. The tidal rise is not more than 10 ft. The sea communicates with the Atlantic Ocean by Davis Strait, and with the Arctic Ocean by Lancaster Sound and Jones Sound on the W, and by Smith Sound on the N. It is frozen during the greater part of the year, but in spring and summer navigable passages open up along both sides.

**Baghdad**, or **Bagdad**, a town in Asiatic Turkey, and capital of the vilayet of the same name, on the Tigris, 220 m up from the Persian Gulf. It is a great commercial centre, though its trade has fallen off since Persia began to import and export goods by Trebizond. There is still, however, a large transit trade, especially with Aleppo and Damascus. It has manufactures of leathers, silks, and cotton stuffs. The principal exports to Europe and America are wool, carpets, galls, gums, liquorice, mohair, skins and hides, and ore. To India and the East the principal exports are almonds, galls, pulse, piece goods, and seeds. The principal imports from Europe are cotton and linen cloth and piece goods, glass ware, metals, soap, sugar (mostly from Marseilles), and general merchandise. From India the principal imports are coffee, gunnies, indigo, pepper, sugar, tea, tobacco, and general merchandise. Letters, 24 days, parcels, *via* Gibraltar, 42 days, *via* Brindisi or Marseilles, 35 days. British consul-general. Area of vilayet, 54,503 m. Pop 850,000. Pop of town, 145,000.

**Bahamas**, a chain of coral islands, the smaller ones spoken of as *Kayos* or *Keys*, in the West Indies, extending about 600 m, from the E coast of Florida to the N coast of Hayti. They belong to Great Britain, and of 29 islands and 660 islets only some 20 are inhabited. The rock is porous and retains moisture, so that the soil is more fertile than might be expected. There are crops of maize,

cotton, pine-apples, oranges, lemons, olives, tamarinds, pimento, cocoa-nuts, and cinnamon, while sponges are found in large quantity in the surrounding seas. The principal imports are textiles (cotton, woollen, and silk), earthenware and glass ware, hard ware, preserved fruit, fish, and meats, flour, salt meat, salt fish, paper, cheese, corn-meal, hominy, rice, sugar, lumber, and machinery. The textile fabrics of the United Kingdom still hold their own, and rather more, in the Bahamas market, but otherwise the imports are chiefly American food stuffs and manufactures brought direct from the United States by regular lines from New York and Baltimore. The principal export is sponge, next to that in importance come pine-apples and other fruits, and the export of sisal fibre is now of considerable moment, cotton might be successfully cultivated if there was a sufficient supply of labour. The entire crop of fruit, fresh or tinned, goes to New York or Baltimore, but a certain proportion of the sponge, sisal fibre, and turtle shell is sent to the United Kingdom. The total value of imports and exports is about £500,000 annually. Of the total trade about 47 per cent is carried in British bottoms. Letters, 10 days. Area about 5300 m. Pop 54,000.

**Bahia**, a town in a state of the same name, in Brazil, the town 1082 m N N E by sea from Rio de Janeiro, on a strip of hilly land on the E coast of one of the largest and most beautiful bays of South America, the Bay of All Saints. The bay is 5 m wide at the mouth, its greatest length 24 m, its greatest width 20 m, and the depth from 6 to 24 fathoms. The most important industry is the tobacco trade, the bulk of the crop going to Germany, which was some twenty-five years ago able to beat the British houses out of the market by the employment of better-trained men and readiness to grant longer credit. Cocoa is sent to France, to the United Kingdom, and to Germany, coffee to the United States and to Germany, hides to the United States and Germany, piassava mostly to the United Kingdom, but owing to the reckless manner in which the natives destroy the palm to obtain the fibre there will, unless the authorities take prompt and efficient measures to protect the tree, very shortly be no piassava in the market. India-rubber is sent to the United Kingdom and to the United States. Whale oil is shipped to Liverpool and Hamburg (industry capable of much improvement). There are also exports of sugar, manganese ore, and precious stones. One of the principal imports is coal, the trade being almost entirely in the hands of British firms, but efforts are being made by Americans to get a footing. Beef, tallow, and meats are imported from other states in South America and the United States, flour from other states in South

America, from the United States, from Austria-Hungary, and from the United Kingdom, hay from other states in South America, and cod-fish from Newfoundland. Barbed wire, imported in considerable quantity, was formerly supplied entirely by the United Kingdom, but Germany and the United States have succeeded in capturing more than half of the whole amount, largely on account of the careless manner in which the British wire was packed for import. Of the total imports Britain has rather more than one-fourth, Germany and the United States almost one-fourth between them. Of the total trade about four-tenths were carried in British bottoms. Regular communication from London, Liverpool, and Southampton. Distance from London, 4505 m, Liverpool, 4430; Glasgow, 4540. Letters, 16 days. British consul. Area of the state, 164,600 m. Pop 1,920,000. Pop of town, 174,500.

**Bahia Blanca**, a seaport and important railway terminus, on a bay of the same name in the Argentine Republic, in the S of the province of Buenos Ayres. There are exports of wool, skins, hair, wheat, and frozen mutton, but almost all the imports come through Buenos Ayres, although, should the Argentine government carry out their intention to erect a customs warehouse, this state of matters will be altered. The surrounding country is very suitable for vines. British vice-consul. Pop 13,000.

**Bahrein**, or **Bahrain**, Islands, a group of islands belonging to Britain in the Persian Gulf, near the coast of Arabia, about 200 m S of Bushme. The principal island, 30 m long by 10 wide, is chiefly coral. Great pearl fishery. Principal imports cattle, coffee, cotton goods and yarn, dates, grain and pulse, ghee, pearls, and mother-of-pearl, exports the same except cattle and ghee. Of the imports about four-fifths come from India, and the bulk of the remainder from Turkey. Of the exports nearly four-fifths are sent to India, and the bulk of the remainder to Turkey. The trade is almost entirely carried in British bottoms. There is a growing demand for all descriptions of cotton piece-goods, and more British steamers might make Bahrein a port of call. The bazaar measure is a yard of 18½ in, and a rubaa is 4 1¼ lb avoirdupois. Pop about 70,000.

**Baikal**, a lake in eastern Siberia, surrounded by mountains rising to a height of 4500 to 5500 ft above sea level. Length, 370 m, breadth, 50 m at widest part. Surface about 1380 ft about sea level, average depth about 900 ft. Frozen from December to the first part of May, when temporary communication is established over the ice. Steamers ply across it in connection with the Siberian railway, and the railway itself is being continued round the S end. Fisheries (salmon, sturgeon, and seal) in the N.

Baireuth, or Bayreuth, chief town of upper Franconia, Bavaria, 126 m. N of Munich, and 43 m by rail N.N.E. of Nuremberg. Grain and horses; industries, textiles (cotton, woollen, linen), leather, parchment, tobacco, and porcelain. Pop 29,500

Baku, a town and a province in Caucasia, in Russia, lying along the Caspian Sea. In the province cattle breeding and the cultivation of the vine are carried on, but the great wealth of the district lies in the petroleum found everywhere in the Apsheron peninsula, the total production being now somewhere about 10,000,000 tons a year. There are altogether nearly 3000 oil-wells, with an average depth of probably 900 ft. The town itself, the capital of the province, has, on account of its situation, wealth, and convenience of communication, become, within the last thirty years, the chief trading centre for the eastern Caucasus, Trans-Caspian, and northern Persia. It has the finest natural harbour on the Caspian Sea, with communication to Russia proper by the new Petrovsk Railway, and to the Black Sea at Batoum (561 m) *via* Tiflis and Poti, with regular steamers to Krasnovodsk, the western terminus of the Trans-caspian line, and also to Enzeli, the principal port of northern Persia. One hundred and thirty tank steamers, with a carrying capacity of 119,000 tons, convey the oil by sea to the various Caspian ports, and into the mouth of the Volga, and over 200 sailing vessels, of nearly a like number of tons, are employed in the same work during the period from April to September, when the Volga is open for navigation. The development of the oil industry has led to a large demand for machinery, and of this, especially the steam-engines, almost the whole has been supplied by British manufacturers, who have done everything possible to meet the wishes of the local users, and so have retained their custom. American pumps have gained a footing on account of their cheapness, the American manufacturers seeming to be able to combine lightness with sufficient strength for the duty required. The reduction in weight saves a very large amount in customs duty, and therefore the American is able to undersell the British maker. In electrical apparatus Britain has been outstripped by Germany, and all the air-compressors which are coming into use as a means of raising the oil are of American manufacture—a fact which points to lack of British enterprise, as the American manufacturer is handicapped by a discriminatory tariff of 50 per cent. The same remark applies to pumping plant. There is a growing demand for oil-engines of great power, but these must be able to meet local requirements—simple in construction, yet suitable for working with the oil in its crude state. The town has also rice mills and cotton mills. British vice-consul.

Area of province, 15,005 m. Pop. 789,659; pop. of town, 112,500

Balbriggan, a town in county Dublin, Ireland, 21 m N.E. of Dublin. Linen and cotton weaving and hosiery, the stockings noted for their fineness and beautiful open work. Pop 2236

Bali, or Little Java, an island separated from the E of Java by the 3 m wide Bali Strait; 73 m long by 35 to 50 wide; exports rice, cotton, coffee, tobacco, edible birds-nests, and catechu. Area, 2300 m. Pop 750,000

Ballarat, an important gold-field town of Victoria, Australia, standing next in importance to Melbourne, from which it lies by rail 71 m W.N.W. Great railway centre. Alluvial gold exhausted, but deep pits have been sunk, and quartz mining gives a fair return. The district is eminently suitable for sheep breeding, and fine and high-priced wool is produced. Pop 44,000

Ballymena, a small town in county Antrim, Ireland, 33 m by rail N.W. of Belfast, railway centre; iron ore, linen and flax centre, linen weaving and bleach fields. Pop 10,886.

Baltic Sea, a great inland sea of northern Europe, connected with the North Sea by the Sound, the Great Belt, the Little Belt, the Cattegat, and the Skager Rack, and also by the Kaiser Wilhelm canal. The northern end of it is known as the Gulf of Bothnia, and opening off the middle of the E. side is the narrow Gulf of Finland. Its greatest length is about 950 m, and its greatest width about 350, but the average distance across is from 100 to 200 m. The area is about 170,000 m, and it has some 5000 m of coast line. The Baltic is shallow, its average depth being somewhere about 20 fathoms, but the northern part is deeper and averages about 90 fathoms. The greatest depth is about 215 fathoms, near the Island of Gothland. Along part of the southern coast are great lagoons known as haffs. Near the entrance the tide rises and falls about a foot, but elsewhere there is practically no tide. The water is brackish rather than salt, an almost necessary consequence of the sea receiving, by about 250 rivers, the drainage of nearly one-fifth of the whole of Europe. In consequence of the shallowness of the water, the dangerous nature of the coasts, and the violent storms, the navigation of the Baltic is at all times dangerous, and during the winter months it is practically impossible owing to the greater part of the sea becoming frozen.

Baltimore, a seaport in Maryland, United States, on the left bank of the Patapsco, an inlet of Chesapeake Bay, 96 m S.W. of Philadelphia, and 40 m N.E. of Washington, D.C. Important railway centre, with excellent harbour connected with the Atlantic by a channel 250 m long, 600 ft wide, and with a depth of 30 ft, which is being gradually increased to

35 ft A dry dock 600 ft long, 70 ft wide, and with 22½ ft of water on the sill at low water, and 25 ft at high water, and several others of smaller size Baltimore, being the only port of very great importance in Maryland, has a very large trade, and there are enormous and ingenious elevators not only for grain but also for coal There is an extensive canning industry for fruit, beef, oysters, and shell-fish. In the neighbourhood are valuable deposits of coal, copper, clay, slate, and chrome The chief imports are copper in bars (in transit), nitrate of soda, coffee, pig-iron and iron ore, rice, toys, chemicals, fruits, burlaps, china, textiles, sugar, and mattings The chief exports are wheat, maize, flour, tobacco, cotton and cotton cloths, copper in ingots and bars, lard, animal foods, bacon and hams, beef, live cattle, chemicals, corn, glucose, hair, iron and steel manufactures, oats, oils, pork, rye, sheep, starch, tallow, and lumber Of a total value of about £20,000,000 of exports the United Kingdom receives about two-fifths, while of a value of a little over £4,000,000 of imports the United Kingdom sends nearly three-eighths Of a total tonnage of shipping of nearly 4,000,000 tons almost two-thirds were British bottoms Regular communication from London, Liverpool, Glasgow, Swansea Distance from Liverpool, 3260 m British consul Pop. 509,000

**Baluchistan**, a country in south-western Asia, between Afghanistan and the Arabian Sea, with an area of about 134,000 m The coast line extends for about 500 m, but there are no good harbours A considerable portion is under British control, and a railway has been made, principally for military purposes, from Sukkur on the Indus to Quetta and Pishin, with one branch through the Bolan Pass 5800 ft. above sea-level. The construction is begun of a railway (82 m) from Quetta S W to Nushki—that is, towards the S E of Persia Coal and petroleum have been found near the railway route Pop about 800,000 Area of British portion, 45,604 m Pop about 300,000

**Bamberg**, a city in Bavaria, 33 m by rail N of Nuremberg, manufactures woollen stuffs, cotton yarn, hardware, leather, gloves, and beer, and produces in neighbourhood considerable quantities of liquorice and garden seeds Pop 42,000

**Banff**, a town in Banffshire, Scotland, with a small harbour Herring fishing and coasting trade The county is important for cattle rearing Area of county, 410,112 acres Pop 61,487 Pop of town, 7161

**Bangalore**, a town and district in Mysore, India, the town 216 m by rail W of Madras, with a considerable trade, and manufactures of silk and carpets Area of district, 2559 m Pop 800,000 Pop of town, 160,000

**Bangkok**, the capital of Siam, on both sides of the river Menam, some 20 m. from its mouth

Access is difficult in consequence of a bar over which there is only a depth of about 13 ft at ordinary spring tides Vessels complete their loading at Koh-si-chang, an island outside. Imports cotton goods, hardware and machinery, opium, silk, sugar, petroleum, coal, and cement, exports rice, teak, ebony, rosewood, boxwood, bêche-de-mer, shark's fins, turtle shells, bullocks, pepper, silk, hides, and edible birds-nests. Of a total export of about £3,000,000, over £2,500,000 goes to the United Kingdom and the dependencies of Singapore and Hong Kong, while of a total import of about £2,500,000, the same three places send £1,750,000 Of a total tonnage of over 1,000,000 entered and cleared, Germany has more than half, Great Britain being second with over one-quarter Regular communication from London, Liverpool, Glasgow, and Middlesbrough Distance from Singapore, 820 m. British consul Pop estimated at 500,000

**Bangor**, a port of Carnarvonshire, Wales, on the Menai Strait, 60 m by rail W of Chester Great slate quarries in the neighbourhood, so that Bangor has extensive exports of roofing slates and also of slabs for cisterns, chimney-pieces, tables, &c Harbour, tidal basin with 17 ft at low water of stream tides, and 11 ft at high water of neap tides Pop 11,269

**Bangor**, a port in Maine, United States, 246 m by rail N E of Boston, 60 m. from the mouth of the Penobscot, with a harbour accessible at spring tides for ships drawing 24 ft. of water Great export of lumber and other timber in bulk (the place being one of the great lumber centres of the world), fruit-boxes, staves, and wood-pulp for paper Pop 22,000

**Banjermasin**, the chief town in the Dutch part of Borneo Has considerable trade in pepper and other spices, gold dust, diamonds, canes, and drugs, imports cotton stuffs, hardware, rice, salt, &c. Pop about 40,000

**Banka**, an island E of Sumatra, in the Dutch East Indies Produces tin, wax, honey, cocoa-nuts, areca nuts, and drugs; imports rice and salt Area about 5000 m Pop about 80,000

**Barbados**, one of the British West Indian Islands, and the most easterly of the whole group, 21 m long and 14 m wide Exports sugar, molasses, rum, hides, tamarinds, aloes, chemicals, and whale oil Imports manures, coal, machinery, rice, fish, flour, hay, timber, coffee, and unground cocoa. Of a total value of imports of a little over £1,000,000, three-fifths come from the United Kingdom and British colonies, and of total exports of about £700,000, nearly £500,000 is for goods sent to foreign countries Regular communication from Southampton, Liverpool, and Plymouth Distance from London, 3805 m, Liverpool, 3730, Glasgow, 3040 Letters, 12 days, parcels, 13 Area, 166 m. Pop 195,000:

Barcelona, a seaport of N E Spain, on the Mediterranean, 140 m by rail N E of Madrid. Good harbour, with a depth at entrance of 24 to 32 ft and a depth of 20 to 21 ft. at the quays. It is the most important industrial centre in Spain and the second seaport, with a very great diversity of industries, and a very large number of factories and workshops in proportion to its population. The most important industry is cotton-spinning and weaving, which gives employment to more than one-fifth of the total population, and there are also soap and glycerine factories, tanneries, &c. Chief imports, raw cotton, sugar, wheat and flour, cod-fish, coffee, cocoa, corn, and yarn. Chief exports, almonds, nuts and other fruits and vegetables, saffron, olive oil, wines, glycerine, wool and hair, hides, tartaric acid, soap, wax matches and candles, drugs, cotton goods, linen and hemp goods, woollen goods, cigarette paper, cork, furniture, boots, shoes, and leather goods and sandals. Of total imports of £12,000,000, about one-fourth comes from the United Kingdom and its colonies. Of total exports of some £4,000,000 about one-tenth is sent to the United Kingdom and its colonies. Of a total trade of some 5,500,000 tons, about 500,000 tons are carried in British bottoms. Regular communication from Liverpool and Glasgow. Distance from London, 1873 m; Liverpool, 1798; Glasgow, 1908; Cardiff, 1693. Letters, 1½ days, parcels, 5. British consul. Area of province, 2985 m. Pop 1,035,000. Pop of town, 510,000.

Bari, a seaport in Apulia, Italy, on the lower part of the Adriatic, 277 m by rail S E of Ancona, 65 m by rail N W. of Brindisi, and 215 m. by sea from Ancona. Has manufactures of cotton, silk, linen, and soap. Depth of water in harbour alongside quay about 27 ft. Imports tobacco, cotton and woollen goods, yarns, coal, metals, petroleum, dried fish, grain, and timber. Exports wine, olive oil, almonds, tartar, soap, hides, figs, and carob beans. Of total imports of nearly £700,000, about one-third comes from the United Kingdom, and of exports valued at over £1,500,000, about one-fifteenth is sent to the United Kingdom. Of a total trade of nearly 2,000,000 tons over 180,000 are carried in British bottoms. Regular communication from Hull. British vice-consul. Pop 80,000.

Bar-le-Duc, the chief town of the department of Meuse, in N E France, on the Marne-Rhine Canal, 160 m by rail E of Paris; manufactures cotton and iron, and has a timber, wool, and wine, trade. Pop 18,000.

Barletta, a seaport in Apulia, Italy, on the lower Adriatic, 34 m by rail N W of Bari. Depth of water at the quay, 21 ft. Imports wood and coals, exports wine, tartar, wine casks. Of a total trade of 600,000 tons over 19,000 were carried in British bottoms. British vice-consul. Pop 32,000.

Barmen, an important manufacturing town in Rhenish Prussia, close to Elberfeld. Manufactures linen, woollens, cotton and silk ribbons, stay-laces, thread, soap, candles, and machinery, has also bleach fields and turkey red dye-works. The artisans are about one-sixth of the whole population, which numbers 112,000.

Barnsley, an industrial town in the West Riding of Yorkshire, England, 15 m by rail N of Sheffield, and on the Barnsley Canal, which takes boats of 6 ft draft to Leeds and Wakefield. Centre of the South Yorkshire coal district. Manufactures linen, paper, glass bottles, swansdown, and has iron foundries, bleaching and dye-works. Pop 41,083.

Baroda, a city and a state in north-western India. The district produces cattle, grain, cotton, opium, tobacco, sugar-cane, and oil seeds. The town, 250 m. by rail N of Bombay, is an important centre of trade for traffic between the coast and the interior. Area of state, 8570 m. Pop 2,500,000, pop of town, 104,040.

Barranquilla, a town in Bolivar, United States of Colombia, and the principal port of the republic. It stands on the left bank of the Magdalena, 65 m N E of Cartagena, and 15 m. from the sea. The river is no longer obstructed by a bar, and there is good harbour accommodation. Imports provisions and general goods, cotton goods, flour, petroleum, rice, salt, wire for fencing, wines. Exports balsam, gold bars and dust, coffee, hides, tobacco, india-rubber, silver ore, silver bars, precious stones, and cattle. Trade might be done in Portland cement, straw hats, wines, cotton goods, and underclothing. Of a total tonnage of about 800,000, 50 per cent were British, but these vessels carried 69 per cent of the cargoes, British vice-consul. Parcels, 26 days. Pop about 40,000.

Barrow-in-Furness, a seaport and manufacturing town in Lancashire, England, on Morecambe Bay, 268 m by rail N N W of London, and 36 m W N W of Lancaster. There are extensive deposits of valuable red hæmatite ore in the neighbourhood, and hence a large number of blast-furnaces, foundries, engineering shops, rolling mills, wire works, steel works, armour-plate making, and ship-building yards. There are also works for the manufacture of jute and flax goods, and paper. Copper also abounds in the neighbourhood, and slate is worked. Excellent harbour, with a depth of 31½ ft. at high water ordinary spring tides, and 24 at neap tides. On the bar the depth is 31½ ft., and in the dredged channel, 41½ ft. Imports general merchandise, iron ore, timber, petroleum, grain, exports iron ore, pig-iron, and steel rails. Pop 57,584.

Barry, a seaport in Glamorgan, Wales, 7 m S W of Cardiff. Colliery district all round. Excellent docks with a depth of 37½ ft. at high

water of spring tides, and 29 ft. at high water of neap tides, and vessels drawing 13 ft. can enter and leave at any time Three graving docks largest, 867 ft long, smallest, 623 ft long; grain elevator, cold storage. Imports timber, bricks, cement, stone, exports coal and pig-iron Pop 27,028

**Basel**, a town and a canton in N W Switzerland, the canton has pasture, fruit, and wine The town, 610 m by rail from London, has manufactures of silk ribbons, yarns, machinery, and chemicals. The Rhine supplies water-power for driving electric machinery Letters, 20 hours, parcels, 1½ days Area of canton, 177 m Pop 181,000, pop of town, 111,000

**Bassein**, the western navigable branch of the Irrawady, and the district through which it flows, Burma. The port is 70 m up the river Vessels anchor in 30 ft. at low water. Communication with the shore by staging Imports coal and salt, exports rice Regular communication from London and Liverpool Area of dist 6848 m Pop 475,000, pop of town, 32,000

**Bastia**, a seaport on the E coast of Corsica Commercial centre of the island, and, unlike most places, has a trade with the United Kingdom which is at present steadily increasing Imports coal from Cardiff and Tyne, but no other British produce Exports to the United Kingdom citrons in brine for the manufacture of candied peel, extract of chestnut wood for tanning, boxwood, antimony, copper, and arsenic ores. These are mostly sent to London, Hull, and Liverpool. Distance from Marseilles, 200 m British vice-consul Pop 25,500

**Basutoland**, a crown colony of South Africa, with Orange River Colony on the W and the N, Cape Colony to the S, and Griqualand and Natal on the E and N.E The surface forms part of the great plateau some 5000 ft above sea level, and has mountains running across it of much greater height Fertile maize, wheat, and corn district, and produces also wool, mohair, ponies, sheep, and cattle, will probably, when fully developed, be very rich in grain for export. Area 10,293 m Pop about 264,000

**Batavia**, the chief town of the Dutch East Indies, on the N W coast of Java Its importance is threatened by Singapore, but meanwhile it continues the commercial centre of the Far East Exports coffee, rice, tin, indigo, hides, sugar, palm-oil, capcut, spices, teak, cassia, tortoise shell, and tamarinds Imports cottons, woollens, opium, petroleum, machinery, coal, hardware, and general goods Total value of imports and exports over £3,000,000, about half of the trade being carried on with Holland There are railways from the port to the interior Regular communication from London and Southampton Distance from Aden, 3960 m, from Torres Straits, 2255 Telegrams, 5s a

word, letters, 27 days; parcels, 44 British consul Pop of province about 1,000,000, of town about 116,000.

**Bathgate**, a town in Linlithgowshire, Scotland, 20 m by rail W. of Edinburgh Coal, limestone, shale, and paraffin wax Pop 7549

**Bathurst**, the principal city in the western part of New South Wales, 145 m W of Sydney, the third town of the colony The surrounding district produces wheat, maize, and other grain crops, tobacco, and grapes, while there is also a considerable amount of pasture land with sheep, cattle, and horses Silver mining is the leading industry of the district, and gold, slate, and copper are also found. Pop 9500

**Bathurst**, the chief British settlement on the Gambia. Regular communication from Liverpool. Letters, 15 days Pop 8800

**Batley**, a town in the West Riding of Yorkshire, 8 m by rail S W of Leeds Manufactures heavy woollens, army clothing, pilot cloths, flushings, druggets, shoddy, &c Pop 30,321.

**Baton Rouge**, the chief town of Louisiana, United States, on the E bank of the Mississippi, 130 m up from New Orleans The district produces large quantities of cotton, sugar, and maize Pop 11,500.

**Batoum**, a seaport of Trans-Caucasia, Russia, on the S E of the Black Sea, connected by rail with Poti, from which it is 83 m distant Harbour good, with 30 to 50 ft of water close to the shore The inner basin has a uniform depth of 26 ft By geographical position the port is the natural landing-place of transit goods for the whole of Trans-Caucasia (the great region lying E. of the Caspian, Peisia, and a large section of Asia Minor), but owing to want of landing accommodation and of facilities for handling traffic, the import trade is much less than it might be, and is not likely to increase till extensive changes are made in these respects. The opening in 1900 of the Trans-caucasian railway, by which Baku was connected with the rest of Russia, has led to large quantities of machinery and other goods, formerly conveyed to Baku *via* Batoum, being now sent to Baku by rail from Riga, the time occupied in transit being diminished by at least half, while the facilities at Riga render landing and loading on railway trucks quite easy matters The place is a great centre for the export of petroleum, manganese, and grain. Of the manganese the United Kingdom takes about 1,000,000 tons, or 40 per cent of the whole export A pipe line, which is now being extended towards Baku, brings petroleum from Mihailova The chief imports are tin-plates, timber, cement, sulphur, copper, iron, steel, tin spelter and lead, and machinery The export is petroleum Products, wool, liquorice, manganese, walnuts, carpets, raw silk, and eggs (the last sent to the

United Kingdom and Germany in the season, October 1st to May 1st, ship to Odessa and thence by rail) More than one fourth of the whole export is sent to the United Kingdom and its colonies, while of the whole imports only about one third is taken from the United Kingdom and its colonies. Of a total trade of over 1,500,000 tons, about three-eighths are carried in British bottoms. Distance from Constantinople and Odessa about 500 m. Regular communication from London, distance, 3670 m. British consul. Pop 29,000

Bautzen, a town and district in Saxony, Germany. The town on the Spree, 31 m. E.N.E. of Dresden, manufactures leather, paper, woollens, linen, and fustian. Area of district, 953 m. Pop 356,000. Pop of town, 26,000

Bavaria, a kingdom on the eastern side of southern Germany, in size and population the second state of the Empire. It has a detached portion known as the Palatinate, or Rhenish Bavaria, on the W. side of the Rhine, N. of Alsace. The surface along a large part of the boundaries is hilly, the ridges to N.E., S.E., and N.W. reaching a height of from 3000 to almost 10,000 ft., the Zugspitze, near the centre of the S. frontier, the highest point of the German empire, being about 9700 ft. Elsewhere there are lower ranges separated by plains and fertile valleys. The Palatinate is drained by the Rhine and streams flowing to it, but the S. of Bavaria proper lies in the basin of the Danube, with the tributary Isar and Inn, and the N. is in the basin of the Main. The whole length of the Danube within the kingdom (about 270 m) is navigable, and the Main from Bamberg downwards. The two are connected by the Ludwigs Canal, 112 m long, 54 ft wide, and 5 to 6 ft. deep. Communication is otherwise good, there being over 4000 m of railways, and double that number of miles of roads. Bavaria is an important transit country for trade between North Germany and Austria, Switzerland, and Italy. The lower parts of the kingdom have a mean temperature of about 50° Fahr. and the higher 39°. The rainfall varies with position and altitude, but taken all over is from 40 to 50 in. More than half of the area is under cultivation, and the chief wealth of Bavaria lies in the produce of its fertile soil. The great plains to the N. of Munich, extending across Lower Bavaria to Upper and Middle Franconia, have been called the granary of Germany. Upper and Middle Franconia have also hops, Lower Franconia and Rhenish Bavaria vines, and excellent wine, Middle Franconia tobacco; and Upper Bavaria and Swabia in the S. flax. The principal grain crops are rye, oats, barley, and wheat. About one-sixth of the surface is under grass, cattle- and sheep-rearing and dairy-farming being extensively carried on

along the lower slopes, and at the foot, of the Alps, especially in Upper and Lower Bavaria and Swabia. Over one third of the whole area is under timber—oak, beech, and pine; the chief forest districts being along the Alps and in the S. as just mentioned, in the Upper Palatinate, and in Middle and Lower Franconia. The chief minerals are salt (in the S.E.); coal, lignite, and iron (in many places); graphite in the extreme S.E. (Passau), and lithographic stone (Solenhofen). Mineral springs also abound. Of manufactures, the brewing of beer is the most important, some 6000 breweries turning out over 700,000,000 gallons a year, so that Bavarian beer is known all the world over. Other industries are connected with pencil-making, Christmas and other art cards and publications (Middle Franconia), coarse linens and woollens (Swabia), distilling, glass, porcelain, jewellery, sugar and chemicals, toys (Nuremberg), mathematical and mechanical instruments, and stained glass (Munich). Area, 29,252 m. Pop 6,176,000

Bayonne, a fortified town in the department of the Baises-Pyrenees, France, 18 m from the frontier, and 63 m by rail W.N.W. of Pau. Good harbour on the Adour with 15 to 19 ft. at high water at the entrance. Manufactures brandy, liquorice, chocolate, leather, and tobacco. Imports phosphates; pitch, coal, and pottery, mostly from the United Kingdom, iron ore, cement, and cork, from Spain. There is a demand for agricultural implements, pig-iron, creosote, linoleum, preserves, and tea, as well as for the articles already imported from Great Britain. Exports gut props, resin, and turpentine (mostly to the United Kingdom, Germany, and Belgium), oak wood (to Spain), slates (to the United Kingdom and Germany), and zinc ore, iron, and steel (to Belgium). Of a total trade of some 250,000 tons, about half is carried in British bottoms. British vice-consul. Pop 28,000

Beaconsfield, a district in Cape Colony, close to Kimberley, including the well-known diamond districts of Bultfontein and Du Toit's Pan. Pop about 11,000

Beaune, a town in the department of Côte-d'Or, France, 23 m by rail S.W. of Dijon. Produces Burgundy wine of the same name, and manufactures serges and woollen cloth. Pop 14,000.

Beauvais, the chief town of the department of Oise, N. France, 34 m S.W. of Amiens. Manufactures tapestry, woollen cloths, shawls, carpets, and cottons. Pop 20,500

Bechuanaland, a great district in British South Africa, between 28° S and the Zambesi R., and between German South-West Africa on the W and the Transvaal Colony on the E. The southern portion, as far N as the R. Molopo, was incorporated with Cape Colony in 1895, the rest of the district, extending to the

Victoria Falls of the Zambesi, is a protectorate. The surface is part of the great central plateau, with an elevation of from 4000 to 5000 ft, and the rainfall, about 25 in along the eastern border, diminishes towards the W. The country is most suitable for cattle (of which it has a large number), sheep, and goats. A considerable amount of it is good corn-land (maize or mealies, and millet, wheat being impossible on account of the summer rains). There seems to be abundance of underground water, and wells and irrigation would probably render a considerable amount of the soil very fertile. Gold exists in some districts. The area of the Cape Colony part is 51,424 m. Pop 80,000. Area of the Protectorate about 386,200 m. Pop estimated at 130,000.

Bedford, a county and a town in the Fen district of England. The county is partly devoted to sheep grazing on the Downs, partly to market gardens, and partly to corn growing, manufactures straw plait, pillow lace, and rush matting. Phosphate of lime and fuller's earth are found. The town, 45 m. N.N.W. of London, has manufactures of agricultural implements. Area of county, 298,494 acres. Pop 171,249. Pop of town, 35,144.

Behar, a town and a province in Bengal, India, in the lower valley of the Ganges. Coal, lead, silver, and copper exist, but are not yet developed. Produces rice, wheat, barley, maize, tobacco, sugar, cotton, and indigo. Exports sugar, indigo, cotton, oil-seeds, opium, and saltpetre. Manufactures muslins, silks, carpets, glass, cutlery, and jewellery, leather, and pottery. The town is 54 m S.E. of Patna, and manufactures silk, cotton, and muslin. Area of province, 44,186 m. Pop. 25,000,000. Pop of town, 45,000.

Behring Sea and Strait.—The sea is the part of the Pacific Ocean lying between the Aleutian Islands in 55° N and Behring Strait in 66° N. The northern part is frozen from November to May. In 1893 it was decided by arbitration that the exclusive right of killing seals claimed by the United States did not exist, and since then the capture of fur seals has been engaged in by both Canadian and United States vessels, but under strict regulations. A close season has been fixed for the whole of Behring Sea and the portion of the Pacific northward from 35° N and eastward of 180° E. No seals may be killed at any time in territorial waters, nor within a circle of 60 m. round the Pribylov Islands. The strait, separating Asia from America, and connecting the Arctic and Pacific Oceans, is 36 m wide.

Beira, a seaport in Portuguese East Africa, on the mouth of the Pungwe R. The coast terminus of the Beira-Salisbury railway, which has a length of 375 m. to Salisbury, in Mashonaland. 205 m. in Portuguese and 170 m. in British

territory. The line has been extended south-westward 300 m to Bulawayo. Vessels of 22 ft can lie alongside the pier, in an excellent natural harbour 6 by 2 m. The surrounding district is rich in alluvial gold, which would probably, if worked on the dredging system common in New Zealand, pay handsomely; and there are also reefs with very rich ore. Imports sugar, beer (principally from Germany and the United Kingdom), wines (principally from Portugal and France), spirits (principally from Portugal, France, and the United Kingdom), lime and cement (principally from Portugal, France, and the United Kingdom), shoes (principally from Portugal), tea (principally from the United Kingdom and colonies), pottery (almost altogether from the United Kingdom and colonies), flour (chiefly from British colonies), preserves (chiefly from Portugal and the United Kingdom), cotton goods (chiefly from the United Kingdom and colonies), woollen goods (from the United Kingdom and colonies), galvanised iron (mostly from the United Kingdom and colonies), general goods (mostly from the United Kingdom). Of a total value of imports of nearly £500,000, Great Britain, British India, British South Africa, and Australia have considerably over one-half. Exports rubber, wax, ivory, and gold. Of a total trade of over 700,000 tons considerably more than half is carried in British bottoms. Regular communication from London. Distance from Delagoa Bay, 485 m., from Mozambique, 480. British consul. Pop. 3500.

Beirut. See Beyroust.

Beith, a town in Ayrshire, 18 m. by rail S.W. of Glasgow, large manufacture of furniture. Pop 4963.

Belfast, the largest town in Ireland; great commercial centre in Ulster; over 100 m. by rail N. of Dublin, at the head of Belfast Lough, at the mouth of the R. Lagan, 12 m. from the Irish Sea, 116 m. S.W. of Glasgow, and 140 N.W. of Liverpool. Belfast is not only the centre of the linen trade in Ireland, but also of that industry in the British Isles. It has also great shipbuilding yards which have produced some of the largest and most powerful men-of-war afloat, as well as many great mercantile steamers. The industries include distilling, brewing, making of aerated waters, iron-founding, rope and sail-cloth making, flour milling, and bleaching. The harbour is very large, and the different docks vary in depth from 14 ft. at low water of ordinary tides to 25 ft. at low water of stream tides, and 34 ft. at high water of stream tides. There are four graving docks, varying in length from 239 to 800 ft, and with a depth of water on the sill at high tide of from 8½ to 25 ft. Pop 349,180.

Belgium.—Surface and Size.—Belgium is a small kingdom of Europe, lying between 49½° and 51½° N and between 2½° and 6° 7' E,

and is bounded N by the modern kingdom of the Netherlands or Holland; E by the Netherlands, Prussia, and the grand-duchy of Luxemburg, S and S W by France, and N W. by the North Sea. The surface generally is flat and low-lying, except along the S E, where the wood-clad Ardennes, extending across the border from France, reach a height of 2000 ft. The coast districts are in places below sea level, and where the natural sand-dunes do not afford sufficient defence have to be protected by dykes, while along the Dutch border there is a low marshy tract known as the Campine, formerly a useless morass, but now partly reclaimed, and with good agricultural ground and woodland. The drainage is carried off by the Scheldt and Maas, which, rising in France, pass through Belgium in their course to the North Sea, which they reach in Holland. The chief tributaries of the former are the Lys, Dender, Durme, and Rupel, and of the latter the Sambre and the Ourthe. The climate is much the same as that of the southern part of Great Britain, except that it is a little colder in winter and a little hotter in summer. The rainfall varies from 28 in in the lower districts to 40 in in the higher. The total area is 11,373 m, the length from Ostend to the Franco-Luxemburg border is about 170 m, and the greatest width about 108 m.

*Government, &c.*—The head of the state is the King, and the Parliament, consisting of a Senate and a House of Representatives, must be called together every year, in November, and must sit for at least forty days. The total population (the densest in Europe) is 6,688,000.

*Communications*—Belgium has some 6000 m of excellent roads, and nearly 3000 m of railway, mostly belonging to the state. The great railway centres are Malines (Mechlin) and Brussels, from which lines branch out in all directions and are again and again united by cross connections. The Scheldt and Maas are navigable throughout their courses (nearly 400 m) in the country, and there are many canals, of which some 800 m are navigable for boats of 300 to 400 tons. The Maas was canalised between 1853 and 1880, and was in 1860 connected with the Scheldt by a canal having a depth of 6½ ft, while the other chief waterways are the Charleroi-Brussels Canal, the Central Canal connecting this with Mons, the Lieve connecting Ghent with Heyst on the North Sea, the Ghent-Terneuzen connecting Ghent with Terneuzen in Holland on the estuary of the Scheldt, and the canal between Ostend and Ghent *via* Bruges. Belgium is well fitted for good water communication, and occupies a superb position for a transit trade between the high seas and France, Germany, and Central Europe, but it has allowed its canals to become old-fashioned, with insufficient depth and insufficient length of locks, the result

being that the better-organised and up-to-date systems of Holland and France have enabled Amsterdam, Rotterdam, Dunkirk, Calais, and Havre to draw away a large amount of commerce that would otherwise have gone to Antwerp.

*Resources and Productions*—Forests cover about one-sixth of the surface, and about two-thirds are under cultivation, the chief crops being wheat, rye, oats, barley, potatoes, beet, hemp, flax, tobacco, hops, chicory, madder, &c. The flax, from the Lys district mostly, is held in high esteem. The breed of horses is well known, and in the Campine attention is given to the production of honey and the rearing of silkworms. Most of the farm holdings are small, more than half of the total being under three acres. The mineral ore lies along the E and in the S E—in the provinces of Hainault, Namur, Liège, and Luxemburg. Coal and iron are particularly abundant, as they also are in the neighbouring districts of France and in the Grand Duchy of Luxemburg. Lead and zinc are produced in Liège, at Verviers and Moresnet, copper in Hainault and Liège, manganese in Namur and Liège, and calamine in Liège.

*Manufactures*—The metal manufactures are, as might therefore be expected, very numerous and valuable, the chief centres being Liège (machinery, cannon and firearms, zinc, tin ware, gold and silver articles, wire, and brass), Seraing (machinery, &c.), Charleroi (nails), Malines (copper), Brussels (wire, brass, and gold and silver articles), Namur (wire and brass); Antwerp (cannon, and gold and silver articles), and Ghent (lead). Other industries are the weaving of linen (very valuable—Ghent, Bruges, Courtrai, &c.), lace (Brussels, Louvain, Bruges), woollens (Verviers, Ypres, Ghent, Tournai), carpets (Louvain and the district round Brussels), cotton (Ghent), silk and velvet (Antwerp and Lierre), hosiery (Hainault), the making of glass—both window and mirror—the most important in Europe, Belgium having sand and making its own soda compounds (Charleroi, Liège, and Namur)—leather and gloves, straw bonnets (Liège), print works (Ghent and Brussels), paper (Brussels and Liège), and beet-sugar, brewing, and distilling. There is also a considerable fishing industry, but there being no duty on fish, Dutch, British, and French fishermen push their stock with vigour in the Ostend and Antwerp markets. Of the population about one-fifteenth are directly connected with agriculture, about one-twentieth with mining and metal industries, about the same proportion with linen weaving, about one-fortieth with lace manufacture, about one-fifteenth with mixed industries, about one-twentieth with commerce, and nearly one-tenth with professions and official occupations.

*Commerce and Trade*—The total imports of articles intended for home consumption have an annual value of about £90,000,000, and the exports of articles of domestic produce about £78,000,000, of which the imports from the United Kingdom amount to about £23,000,000, and the exports to the United Kingdom to about £10,000,000. The import from France is about one-and-a-half times that of Great Britain, from Germany a little more, from the United States a little less, and from Holland less than three-quarters of the amount. Of a total trade of over 17,000,000 tons, more than one-half was carried in British bottoms; Germany, and Belgium itself, coming next with about one-fifth each. The exports to France are about one-and-a-quarter of the amount to Great Britain, to Germany about one-and-a-quarter, to the United States a quarter, and to Holland a little over a half. The principal articles imported into Belgium from the United Kingdom are: diamonds, resin and bitumen; cotton, woollen, linen, and other yarns, &c.; cotton, woollen, linen, hemp, jute, and silk, tissues, floor-cloth, straw-plait, hair, copper, nickel, pewter, iron, tin, lead, zinc, hides (raw and prepared), coal and coke, live stock, beer, oak, walnut, and other cabinet woods, candles, cocoa and cocoa-nut butter, india-rubber, preserves, cordage, salt, rags, drugs, manure, fruit, clothes, vegetable oils, machinery, grease and other raw animal substances, mercury, hardware, furniture, fish, chemical products, soap, sugar, indigo and other dyes and colours, tea, oil-seeds, oil-cake, hops, meat, wine, and carriages (not rail or tram). The chief exports to the United Kingdom are sugar, glass ware, cotton, woollen, and linen yarn, cotton, woollen, linen, hemp, and jute goods, tow, wool, flax, steel, iron, zinc, lead, copper, pewter, starch, arms, made up wood, india-rubber, coal, preserves, cordage, potatoes, eggs, rags, drugs, manure, fruit, flour, underclothing, palm and other vegetable oils, mercury, hardware, furniture, paper, pottery, chemical products, resin and bitumen, dyes, seeds, plants and flowers, meat, and carriages (not rail or tram). There is a protective tariff. There are over 500 industrial and technical schools, with more than 40,000 students. There is a British consul at Antwerp, and vice-consuls at Antwerp, Brussels, Ghent, Liege, Ostend, and Spa. Letter postage, 2½d per ½ oz., postcards, 1d; parcels not over 3 lbs., 1s. 3d.; between 3 and 7, 1s. 5d.; between 7 and 11, 2s. 2½d.; telegrams, 2d. a word, four mails from and to London every day.

*Money, &c.*—The business unit is the franc, and the money, weights, and measures are according to the metric system (see France). The Belgian mercantile flag consists of three vertical bars—black next the staff, yellow in the centre, and red at the outer edge.

*Belize, or British Honduras*, a British colony on the W. side of the Gulf of Honduras, in the W. of the Caribbean Sea, and bounded on the N. by the Yucatan province of Mexico, and on the W. by Guatemala. Produces cedar, mahogany, rosewood, logwood, sugar, coffee, sarsaparilla, bananas, plantains, oranges, pine-apples, limes, mangoes, and tortoise-shell. The town stands at the mouth of the Belize R., on which there is a bar with only 3 ft. of water, and vessels have to load and discharge by means of lighters. Imports chiefly general goods, cotton yarn and cloth, and hardware, exports most of the products given above. Distance from Kingston, Jamaica, 690 m.; London 4570 m. Letters, 16 days; parcels, 25. Area of colony, 7562 m. Pop 37,500. Pop. of town, 9500.

*Belleek*, a small town on the R. Erne, Fermanagh, Ireland, with manufactures of pottery.

*Belle Isle, Strait of*, an opening at the mouth of the R. St. Lawrence, between Newfoundland and Quebec and Labrador, with a length of 70 m., and a breadth of 10 to 15 m.

*Bell Rock*, a reef, about 700 yards long, in the North Sea, 12 m. S.E. of Arbroath. At extreme low water the rocks project about 4 ft. Lighthouse.

*Belt, Great, and Little*, two openings from the Baltic to the Cattegat, the first, 40 m. long and from 10 to 20 m. wide, between Zealand and Funen, and the second, 40 m. long and 10 to 16 m. broad, between Funen and Jutland. Depth of water, 30 ft., but navigation dangerous on account of shoals and sudden storms. Kept open in winter by ice-breakers.

*Benares*, a city and a district in the N.W. Provinces, India. City 420 m. by rail N.W. of Calcutta, and 72 m. E. of Allahabad, on the left bank of the Ganges. Famous as a pilgrim centre, it is also well known for its brass ware, gold cloth, and lacquer toys, and has a considerable trade in British merchandise, jewellery, and precious stones. Pop 209,500.

*Bendigo*, a county and a town in Victoria, Australia. The district is rich in gold, output over 200 000 ozs. annually; grapes grown for the production of wine, and apples and other fruits also exported. The town, on Bendigo Creek, 101 m. by rail N.N.W. of Melbourne, is an important railway centre. Pop 31,000.

*Bengal, or Lower Bengal*, a lieutenant-governorship of British India, embracing the low-lying deltas of the Ganges and Brahmaputra, and the great alluvial plains along their courses. The largest and most populous of the twelve divisions of British India, it is bounded N. by the Himalaya states of Nepal, Sikkim, and Bhutan; E. by Assam and Upper Burma; W. by the N.W. provinces and Central India; and S. by Madras; while on the S.E., the top of the Bay of Bengal stretches for over 500 m. It is divided into Bengal proper (along

the top of the Bay of Bengal), Behar (to the N), Chota Nagpur (in the S.W., inland), and Orissa (in the S.W., along the coast), and has generally a flat surface, though the N is invaded by spurs of the Himalayas, and the S.W. by ridges from the central Indian plateau. Besides the main streams of the Ganges and Brahmaputra, the district (the delta part more particularly) is covered with a network of streams, of which the chief are the Hughli, the Damodar (a right bank tributary of the Hughli), and the Mahanadi in Orissa. The rivers when in flood all carry down great quantities of mud, which constantly infuses such fresh vigour into the land over which it is spread, that no amount of over-cropping seems to affect the fertility. In the low ground the climate is temperate in the cold season, but rises to over 100° Fahr. in summer. In the hills it is temperate all the year round. The rainfall rises from 65 in at Calcutta to 126 at Darjeeling, and to 527 at Chera Punji in Assam, which is said to be the wettest place in the world—and no wonder. The chief agricultural products are rice and pulse, indigo, jute, opium, sugar-cane, oil-seed, cotton, ginger, pepper, tea, cinchona, turmeric, spices, drugs, mulberry, and timber. Tussore, or tussur, silk is obtained from the cocoons of wild moths in the forests of Chota Nagpur. The mineral wealth is great, the Bengal coalfields producing over four-fifths of all the coal raised in India. Of these the chief are in the basin of the Damodar and its tributaries, especially at Raniganj (120 m N.W. of Calcutta), Karharbari, and Jharia. Iron ore is found in the same district, but the quality is poor, and success has not so far attended the efforts to establish a smelting industry. There is also coal in the eastern hills, and the northern part of Behar has surface deposits of saltpetre and other saline incrustations. There are manufactures of jute fabrics and gunny bags, cotton piece goods, muslins, pack-thread, canvas, and silk. There is good communication by river and rail, and a large consequent transit trade—much of the grain from the north-west, and jute and tea from Assam and the hill skirts, finding its way to Calcutta. The total exports, mostly to the United Kingdom, amount to £45,000,000, and the imports, mostly from the United Kingdom, to £27,000,000. Of the value of exports it has been estimated that opium takes about 18 per cent, jute 15, grain and pulse 14, tea 13, oil-seed 11, indigo over 7, hides 7, cotton 4½, and silk 2, while lac, saltpetre, and castor-oil make up a large proportion of the remainder. Area, 151,185 m. Pop 74,745,000.

**Bengal, Bay of**, a great triangular off-shoot of the Indian Ocean extending in a northward sweep between India and the Malay Peninsula. Each side measures about 1200 m.

**Bengazi**, a seaport on the N coast of Africa,

on the E side of the Gulf of Sidra; chief town of the Turkish vilayet of Barca. There is a good roadstead, but no vessel drawing over 6 ft can enter the harbour. This is a starting point for caravans trading with the interior, and exports, to places along the Mediterranean, oxen, sheep, wool, butter, sponges, grain, ostrich feathers, and ivory, imports cotton and woollen goods, coal and iron (mostly from the United Kingdom), petroleum, hides, oil, and general goods. British consul. Pop 19,000.

**Benguela**, a seaport in Angola, Portuguese West Africa. Ships anchor in an exposed roadstead, in 4 to 6 fathoms, about a mile from shore. Exports amber, rubber, ivory, skins, coffee, gold, and copper. British vice-consul. Pop about 3000.

**Benin**, a district in W Africa, in the British sphere, N.W. of the British Niger Coast Protectorate, drained by a river of the same name. The depth on the river bar is from 9 to 13 ft, and in the channel from 12 to 17 ft. Imports general goods, exports palm oil and kernels. Regular communication from Liverpool. Letters, 27 days. British vice-consul. The Bight of Benin is a considerable stretch of coast extending for about 450 m along the Gulf of Guinea, between Cape Formosa on the E. and Cape St. Paul on the W.

**Benue**, an important tributary of the Niger, navigable for boats of 5 ft draft some 700 m up. The lower part is within the British sphere.

**Berar**, a district in India, E of Bombay; fertile soil and regular rainfall, important crops of millet, cotton, wheat, oil-seeds, tobacco, and castor-oil, coal is found in the S.E. Area, 17,710 m. Pop 2,754,000.

**Berber**, a town on the right bank of the Nile, in the Soudan, the point at which the trade route from Suakim meets the river. Pop about 30,000.

**Berbera**, a seaport in Somaliland, East Africa, on the Gulf of Aden, with a good harbour about 12 fathoms deep at the mouth, shoaling gradually to 5 fathoms farther in. Imports cotton, rice, flour, dates, sugar, and Indian piece goods, exports gum and resins, skins, clarified butter, ostrich feathers, sheep, goats, and cattle, the trade being chiefly in the hands of American firms in business at Aden. American grey shirting occupies by far the most important place among the cottons imported. British vice-consul.

**Berbice**, a river and a district in the E of British Guiana, the river navigable by vessels of 7 ft draft for 160 m from the sea, there are exports of hides, cotton, timber, sugar, and rum. Regular communication from London.

**Berdyansk**, a seaport in the Crimea, Russia, on the Sea of Azov, 100 m S.W. of Taganrog; ships anchor about 2 m S.W. of the town, and at the end of a long breakwater there is a

depth of about 14 ft. Exports grain, rape seed and rape-seed cake, hemp, wool, and skins. British vice consul Pop about 30,000

**Berezina**, a tributary of the Dneiper, W Russia, forming part of the canal system which connects the Dneiper with the Neva.

**Bergamo**, a fortified town in Lombardy, Italy, chief town of the province of the same name, 34 m by rail N E of Milan. Manufactures silk, cotton, linen, woollen, and fine ivory, goods. Noted for grindstones. Area of province, 1098 m Pop 458,000, pop of town, 46,000

**Bergen**, a seaport of Norway, 190 m W N W of Christiania. Manufactures are not important, but the place is a great fishing centre, codfish for salting, fish roe, cod-liver oil, also a trade in blubber, skins, and feathers. Harbour has depth sufficient for the largest vessels, and is never obstructed by ice. Three dry docks from 250 to 365 ft, and with depth of from 12 to 20 ft on the sill at ordinary high water. Imports grain, salt, coal, iron, hardware, and general goods, exports bones, codfish, herring, cod-liver oil, roe, skins, &c. Regular communication from Hull, distance 450 m, Newcastle, 430, Leith, 400. Letters, 2½ days, parcels same *via* Newcastle, or 6 *via* Christiania. British vice-consul Pop 75,000

**Berkeley**, a town in Gloucestershire, England, in a rich pasture district famous for the production of "Gloster cheese"

**Berkshire**, a county on the S side of the lower Thames, England; excellent agricultural district, sheep grazing and woodland, makes "Gloster cheese." Area, 462,224 acres Pop 254,931

**Berlin**, the capital of Prussia and of the German Empire, on the Spree, 177 m by rail S E of Hamburg, 100 m N E of Leipzig, and 362 N E. of Cologne, 25 hours distant from London (745 m), 23½ from Paris, and 15 from Vienna. The situation on a sandy low-lying plain is very disadvantageous, but its geographical position, in the centre of northern Prussia and of the waterways covering the whole district between the Elbe and the Oder, and at the crossing point of the lines of communication between Brandenburg, Silesia, and Saxony on the one hand, and Hanover, Mecklenburg, and Pomerania on the other, could for commercial purposes hardly be surpassed. It is practically half-way between Hamburg and Breslau, between Stettin and Leipzig, and between Memel and Alsace, between the Russian and the Dutch frontiers, and between the hill country of North Germany and the Baltic. It is now a great manufacturing town, producing woollen and cotton fabrics, porcelain, earthenware, machinery, electric apparatus, metal goods, railway plant, sewing machines, jewellery, pianos, ladies' mantles, beer, paper, &c. Time for 12 noon at Greenwich, 12 44 p. m. Letters,

1 day; parcels, *via* Holland, 1½ day. British consul-general. Pop 1,889,000

**Bermudas**, a group of islands in mid-Atlantic belonging to Great Britain. The nearest point in America, 580 m S E, is Cape Hatteras in South Carolina. The soil is poor, but frost is unknown, and consequently large quantities of potatoes, onions, tomatoes, and other garden vegetables can be placed on the New York market in the early months of the year, from March to June, when they command high prices. There is also an export of bulbs to Canada and the United States, and a small export of arrowroot, bulbs, hides, and tallow to the United Kingdom. Of a total export of about £120,000, over eleven-twelfths go to the United States. The imports consist of provisions and general goods, and out of a total of nearly £400,000, five-eighths come from the United States. Great pontoon floating dock 545 ft, capable of taking vessels up to 32 ft. Distance from New York, 685 m, London, 3055 m, Glasgow, 3090 m. Letters, 11 days. Area, 20 m Pop 17,000

**Bern**, a town and a canton in Switzerland between the centre and the French and German borders. Forests, especially pine and beech, pastures, and vines, iron and coal are found in the N W, and there are manufactures of linen and woollen fabrics, lace, watches, articles of wood, and cheese. The town, which is also the capital of Switzerland, has small manufactures of dress goods and hats. Letters, 1 day; parcels, 1½ day. British consul. Area of canton, 2657 m. Pop 589,500. Pop of town, 65,000

**Berry**, Canal de, a very important French canal, extending from Montluçon on the Cher, on a great coalfield, to St. Amand, from a little beyond which one branch passes off north-eastward to the Loire canal from Nevers, and the other northward back to the Cher, which forms a line of communication to Tours. Total length of system, 200 m

**Berwick-on-Tweed**, a seaport on the N. bank of the Tweed, in the N E. of England, 57 m E S E of Edinburgh. The harbour has a depth of water at ordinary tides of 18 ft., at spring tides of 21 ft. Manufactures agricultural implements, imports timber, guano, bones, artificial manures, exports grain, coal, cement, cod, herring. Pop 13,437.

**Berwickshire**, a south-eastern county of Scotland, flat and fertile, agricultural district towards the S E, hilly in the N W, with sheep grazing. Area, 292,577 acres. Pop 30,824.

**Besançon**, the chief town of the department of Doubs, on both sides of the R. Doubs, 57 m by rail E of Dijon. On the Rhone and Rhine canal, and occupies an important position on the roads and railways passing through the narrow opening between the Jura and the Vosges. Nearly one-third of the inhabitants are engaged in watch and clock making, the

different parts being made in the Swiss Jura, and put together in Besançon Pop 55,500

**Bessarabia**, a province of S W Russia, lying along the Roumanian frontier. The N is occupied by spurs of the Carpathians, but the W. is flat and fertile. The higher ground is covered with wood, and in the low ground attention is paid to cattle breeding, tobacco, and vines. Manufactures leather, soap, and candles. Exports cattle, wool, tallow, and salt. Area, 17,627 m Pop 1,934,500

**Beuthen**, a town in Silesia in Prussia, 121 m. by rail S E. of Bre-lau, and two miles from the Polish frontier. Great mining and smelting centre with zinc and coal mines, and zinc and iron works. Manufactures also woollens and earthenware. Pop 51,500

**Beyrout**, an important seaport in Syria, 55 m. N W. of Damascus, with which it is connected by road and railway. Inner and outer harbour, the inner having an anchorage with a depth of from 25 to 45 ft., and the outer with a depth of from 40 to 100 fathoms. Manufactures silks and gold and silver thread. Imports cloth and ready-made clothing (largely from the United Kingdom), cotton and cotton yarns (largely from the United Kingdom), coal and patent fuel (almost entirely from the United Kingdom), coffee, fezes, glass and china, hardware, iron and steel (from Belgium, Sweden, and the United Kingdom—Belgian iron being only £8 per ton as against £13 for British), nails (almost entirely at present from Belgium, Italy, and France), iron stoves (mostly from France, as they are cheaper than those sent from the United Kingdom), caustic soda (United Kingdom), leather, sugar, paper and stationery, rice, and silk stuffs. The principal exports are barley, silk cocoons, liquorice, silk thread and stuffs, woollen and cotton stuffs. The silk and silk cocoons go mostly to France, the wheat and barley largely to the United Kingdom. Of a total import of less than £1,500,000, the United Kingdom sends considerably more than half, Austria-Hungary and Germany come next, each with a little over one-tenth. Of a total export of about £700,000, the United Kingdom takes one-twentieth. Of a total trade of 850,000 tons, about one-fifth is carried in British bottoms. Regular communication from London and Liverpool. Distance from Alexandria, 300 m. Letters, 8 days, parcels, 20 days. British consul-general Pop 119,000

**Béziers**, a town in the department of Hérault, in France, at the point where the Canal du Midi enters the Orb, 49 m. by rail S W of Montpellier, silk and woollen weaving, glass, soap, and leather Pop 52,500

**Bhamo**, a town in Upper Burma, at the head of the navigation on the Irrawady, 300 m from Mandalay, and 50 m. W of the Chinese frontier. It is an important place in connection with trade with China, which is carried on by the

Ta-peng valley and Momein (Teng-tsch), and so by Tali to Yunnan Pop about 7000.

**Biella**, a town in Piedmont, Italy, centre of woollen industry, and has iron and steel works. Pop 12,000

**Bilbao**, a port of N Spain, on the coast of the Bay of Biscay, with a larger shipping traffic than any other port in the country. Situated on canalised R. Nervion, 8 m up from the mouth at Portugalete. The bar has 19 ft. at neap tides, and 24½ at springs, but is rendered dangerous by heavy seas. The place owes its importance to the abundance of iron ore in the neighbourhood, mostly about Somorrostro, 7 m. W. Chief imports from the United Kingdom, coal and coke, rolled, cast, and forged, iron; machinery and railway plant materials, pottery and porcelain, and fish, from other countries, cement (mostly France and Belgium), coal and coke (Belgium and Germany), drugs (Germany), timber and wood pulp for paper, machinery (Belgium), and general provisions. The great export is iron ore, over 4,000,000 tons annually, of which three-fourths go to the United Kingdom; other articles of importance are pig-iron and wine. Of a total tonnage of over 5,000,000 tons entered and cleared, about two-fifths were British, the only other country at all competing with it being Spain. In the case of iron ore the German dealers are able to obtain their ore faster and cheaper than British iron-masters, as they are willing to take it with a somewhat larger percentage of phosphorus. Other minerals are blende and calamine (Lanestosa and Carranza), lead (Arcentale) and a very poor coal. Copper is no longer worked. A new railway from Madrid to Bercedo *via* Burgos will make Bilbao the nearest port to the capital. British commercial travellers to push the trade of the United Kingdom are sadly wanted, the German and French travellers noted in 1900 being 128 and 52 as against 3 British. The German is pushing hard, and here as elsewhere gains ground by his greater adaptability to what his customer likes, and (where he can with safety) to local custom in the matter of long credit. Distance from London, 800 m. Regular communication from Glasgow. British consul Pop 74,000

**Billiton**, an island in the Dutch East Indies, W of Borneo, about 50 m long, 45 broad, and with an area of 1855 m. Produces tin, iron, timber, and topaz, exports these, and rice, trepang, edible birds-nests, seaweed, tortoise-shell, and wax. Chief town, Pandang Pop of island, 42,000

**Bilston**, a town in Staffordshire, England, 2½ m by rail S E of Wolverhampton. Iron smelting works and iron foundries (fine casting sand in neighbourhood), tin-plate, japanned and enamelled ware, nails, and screws. Stone suitable for grindstones in neighbourhood Pop 24,034.

**Birkenhead.** See Liverpool

**Birmingham,** a town of Warwickshire, England, with suburbs extending into Staffordshire and Worcestershire, 112 m by rail N.W. of London, and 97½ m S E of Liverpool, one of the great manufacturing towns of the Midlands. The manufactures of the present day extend to all kinds of metal work, founding, rolling, stamping, plating, and drawing, of metals, making of machinery, iron roofs, girders, gasometers; steam, gas, and hydraulic, engines; railway plant, electric apparatus, tools, guns, rifles, bells, electro-plating, watch and clock making, glass-blowing, chemicals, ammunition, swords, metal ornaments, jewellery, coins, buttons, buckles, lamps, toys, pins, steel pens, screws, nails, and locks. At the gun proof-house nearly 600,000 gun barrels are now tested every year. Canals to the Severn, Thames, Mersey, and by the potteries to the Trent; and railways in all directions. Pop 522,182

**Biscay, Bay of,** a great sweep of the Atlantic Ocean, extending from Ushant, on the western shores of France, in a curve southward, and then westward along the coast of Spain to Cape Ortegal, where the Pyrenees run out to sea. It measures about 400 m. across the entrance, and its breadth is also 400 m. The depth varies from 20 fathoms on the French coast to 200 fathoms along the N side of Spain. A strong current, known as Rennel's current, curves round the N coast of Spain, and stormy westerly or north-westerly (the prevailing) winds cause a dangerous and disagreeable swell.

**Bitlis,** a town and a vilayet in Asiatic Turkey, near Lake Van. The town is 62 m W of Van, 120 m N E of Diarbekir, and the same distance S E of Erzerum. Manufactures cotton cloth, dyed of a peculiar bright red, and jewellery, and exports canvas cloth and tobacco, but only a little mohair to the United Kingdom. British vice-consul. Area of vilayet, 10,345 m. Pop 399,000. Pop of town, 39,000.

**Blackburn,** a town in Lancashire, England. Great centre of cotton weaving, being probably the largest and most important cotton manufacturing town in the world. Pop 127,527.

**Black Forest,** a mountain range in Germany, on the E side of the middle Rhine valley, along which it stretches for nearly 100 m. It is mostly in Baden, but passes on the E side into Würtemberg. Silver, copper, cobalt, lead, iron, coal, and salt occur in different parts, but the great source of wealth is in the forests, large quantities of timber being cut, sawn up, and floated down the Rhine and Neckar. In the southern parts there is a great manufacture for export of wooden clocks, musical instruments, and different fancy articles in wood. On the western side are many vineyards. Highest point, Feldberg (4903 ft.)

**Black Sea,** an inland sea between Europe and Asia, surrounded by Russia, Turkey, Bulgaria, and Roumania, and communicating on the N E with the Sea of Azov by the Strait of Yenikale, and on the S W. by the Bosphorus, Sea of Marmora, and the Dardanelles with the Mediterranean. The greatest length is about 720 m, the greatest width 380 m, and the area about 163,700 m. Except between the mouths of the Danube and the Crimea, the shores are bold and high, and a depth of 100 fathoms is reached close to the shore. From this the bottom slopes towards the centre, where the greatest depth is 1227 fathoms, and the average depth from 1000 to 1100 fathoms. In summer navigation is safe, but in winter the storms are sudden, and exceedingly violent and dangerous. The Black Sea receives the drainage of about a quarter of Europe, and of over 100,000 m of Asia, with the result that the water is brackish, and so along the shore, between Odessa and the Crimea, ice forms for the first two months of every year, and the dangers of winter navigation are increased by the presence of floating ice. There is no tide, but the large influx of fresh water causes currents, which increase in strength in spring, when the streams are flooded by the melting of the snow. The surface current runs out through the Bosphorus at the rate of about 4½ m. an hour, and there is a return under-current of salt water at a depth of from 12 to 25 fathoms.

**Blackwall,** a district of the E end of London, with the East and West India Docks.

**Blaenau-Ffestiniog,** a town in Merionethshire, Wales, 9 m N E of Portmadoc, connected with the Festiniog slate quarries. Pop 8000.

**Blois,** chief town of the department of Loiret-Cher, France, on the Loire, 32 m. by rail N E of Tours and 36 S W. of Orleans, manufactures porcelain and gloves. Pop 24,000.

**Bluff Harbour, or Campbelltown,** a port of New Zealand on the E side of New Ross Estuary, 17 m from Invercargill. There is a depth of 24 to 30 ft. of water. Imports guano, timber, and coal, exports wool, hides, tinned meat, tinned rabbits, frozen mutton, tallow, timber, and fish. Port of call for Melbourne steamers. Pop 1400.

**Bochum,** a town in Westphalia, Prussia, 35 m. by rail N E of Dusseldorf, and 9 m E. of Essen. Great centre of Westphalian manufactures, in the middle of the Ruhr coal basin. Enormous steel-works which turn out armour-plating, steel ropes, and cables, and there are manufactures of machinery, paper, zinc, coke, aniline dyes, felt, and carpets. Pop 66,000.

**Bodmin,** the county town of Cornwall, England, 30 m. by rail N N W of Plymouth. Manufactures boots, and serge. Pop 5353.

**Bohemia,** a northern province of Austria-Hungary, bordering on Bavaria, Saxony, and Prussian Silesia. The surface is an undulating

plateau with a slight northern slope, and surrounded by mountain ranges, N.E. by the Riesengebirge (5339 ft.), N.W. by the Lengebirge (4000 ft.), S.W. by the Bohemian Forest (4763 ft.), and S.E. by the Bohemian and Moravian Mountains. The drainage is carried off by the Elbe and its tributaries, of which the chief are the Moldau (with the Sava and Beraun), the Iser, and the Elger. The climate of the valleys is genial, but in the upper districts it is raw and cold. Although shut in by hills, Bohemia has good communication by rail and water down the Elbe valley, the distance by river from Prague to Hamburg being 191 m. The rivers in the country have courses of 721 m., of which 506 are navigable for rafts, and 220 for ships. The Elbe traffic is the most important (even now over 2½ million tons), and it will become still more so when the operations for making (by means of locks and dams) the whole Moldau-Elbe route from Prague to the frontier 6½ ft. deep, and so navigable for barges of from 700 to 800 tons, are completed by 1906. The whole length to be dealt with is 100 m., and the cost will be over £1,000,000. There are about 2600 m. of railway in the country. About one-third of the surface is under wood, and nearly one-half cultivated. The grain crops—wheat, rye, barley, and oats—form about one-sixth of the whole grain produce of Austria-Hungary, and there is a considerable acreage under flax, hops, fruit, vines (valleys of Moldau and Elbe only), and beet. The hops are important for the light beer produced at Pilsen and elsewhere, but commercially the beet (370,000 acres) is the most important product, Bohemia turning out nearly half of the whole amount of sugar (some 900,000 tons) made in the Austrian empire. This is due to natural advantages for beet cultivation, a plentiful supply of coal and water, and a ready means of transport to Hamburg by river and rail. The refuse beet finds a ready sale as cattle food. The Bohemian refineries also work up a considerable amount of the raw product from Moravia. The great bulk of the sugar goes to the United Kingdom, where it sells at little over half what is charged for the same article in the grocers' shops in Bohemia itself—an illustration of one of the effects of protective duties—but the whole of the 116,000 tons of molasses produced is practically consumed within Austria-Hungary itself. Of the minerals (and this is by far the richest mineral district of the dual monarchy) the most important is lignite, of which Bohemia produces a quantity valued at about £3,000,000 a year—four-fifths of the quantity and three-fourths of the value of the whole output of Austria. There is also black coal about Kladno and Pilsen, of which the production has an annual value of £1,250,000. The iron ore between Prague and Beraun contains a con-

siderable percentage of phosphorus, but has been commercially very valuable since the Thomas-Gilchrist process was introduced in 1879. There is a good deal of silver about Příbram, a little gold (at Fale, Borkowitz, and Wysoka), a small amount of antimony (at Schönborg and Prácheňowitz), and zinc, tin, graphite, lead, and sulphur are also found. The manufactures include woollens in the Reichenberg and Kratzau districts on the Saxon frontier, at Aach on the Bavarian frontier, and at Aussig in the N., carpets of all sorts in the Reichenberg, Reussberg, and Elger districts, cotton spinning and weaving in the districts of Reichenberg, Taunwald, the Elbe valley, Tetschen, and Benzen, cotton and woollen printing in the Königshof and Warnsdorf districts, and in the neighbourhood of Prague; linen weaving in Starckenbach, Hohenelbe, Kroh, Eipel, and Schönborg, and spinning in the Trautenau and Auss-Thale districts; silk at Reichenberg, Königshof, and elsewhere; paper in the Riesengebirge and elsewhere (sent mostly to Germany and Italy), gloves about Prague (sent to the United Kingdom and Germany in nearly equal proportions); glass, decorated and coloured, at Haida and Steinschönau, buttons, beads, imitation stones, &c., at Gablonz, bottles, syphons, &c., about Prague; patent wire glass in the Elger district, and porcelain about Carlsbad. There are important mineral springs at Carlsbad, Marienbad, Franzensbad, Teplitz, Johanniskbad, Bilin, and elsewhere. The linen industries have suffered considerably owing to raised duties in the United States, Germany, Italy, and Switzerland. Many of the peasantry find winter occupation at home in spinning wool and weaving woollen and other fabrics, and there used to be a considerable peasant home industry in the making of bright-coloured prayer rugs for the Levant market, but some of the large plush factories are now ousting these with cheaper machine-made articles. From the United Kingdom, Bohemia takes heavy agricultural machinery and road rollers, but tools are obtained mostly from Germany. There seems no very good reason why the enamel ware and iron furniture the kingdom supplies to British India and other countries could not be supplied equally well by Great Britain, nor why the latter country could not itself supply the "weapons" that come to it from Bohemia. Area, 20,060 m. Pop 6,319,000.

**Bohemian Forest, or Bohmerwald,** the mountain range forming the boundary between Bohemia and Bavaria. Highest point, Arber (14,840 ft.) Rich in silver, lead, iron, antimony, zinc, cobalt, cinnabar, and has a little coal.

**Bokhara,** a khanate of central Asia with Afghanistan on the S., and surrounded elsewhere by provinces and tributary states of Russia, of which Bokhara is in reality a portion.

The rivers are the Oxus, in the S and W., the Zarafshan in the N E., and the Surkhob in the W., and except where water is available from these for irrigation, the soil is barren. The W. is hot and dry, with a flat surface, fertile through irrigation, and producing pasture for stock-rearing, cotton, and vines, the middle is a plateau (1000 ft.) colder and damper, with rich valleys—agriculture and cattle-rearing, and on the hill-slopes pistachios, almonds, and other fruits; the E. is a mountain region (mountains rising to 25,000 ft.), within valleys, cereals, horses, and mulberries for mulberry flour. There is wealth of flocks and herds—sheep, goats, camels, horses, asses, and silk worms are reared. There are deposits of salt, sulphur, alum, and sal ammoniac; and crops of rice, cotton, wheat, barley, beetroot, hemp (used for making bhang), camels-thorn (from which a sugary gum called manna is obtained), tobacco, fruits, and vegetables. There is a great transit trade between Russia and the southern countries of Asia, and this has become more important since the opening of the Transcaspian railway. Only roads are tracks fit for pedestrians and beasts of burden. Area about 90,000 m. Pop. probably about 1,500,000.

**Bolan**, a pass leading from the plain of the Indus and southern Baluchistan to the plateau of British Baluchistan near Quetta. The length is about 56 m., in which distance the surface rises from 800 to 5800 ft. above sea level. The pass is traversed by a good military road and also by a military railway, part of which is worked with a centre cog-wheel. The precipitous sides of the pass rise to a height of 800 ft.

**Bolivia—Situation and Size**—Bolivia is a republic near the centre of the W. side of South America, but cut off from the coast since 1882 when Chile took possession of the districts W. of the Andes. It lies between 8° and 23° S., and 57½° and 73° W., and is bounded N N E and E by Brazil, S E and S by Paraguay and the Argentine, and W by Chile and Peru. The south-western portion consists of plateaux lying between the Andes and the Cordillera Real to the E. Of these the northern—the Oruro plateau, 150 m. wide—with Lake Titicaca and the salt Lake Aullagas (or Poopo) is some 13,000 ft. above sea level, with the mountains rising 8000 ft. above it. The portion to the S. is lower, and a sandy or salt-covered desert. Along the N E. the hills sink rapidly, and on the E. by a series of terraces to the great northern and eastern Bolivian plain, of which the former is drained by the Beni and Mamore to the Madeira, a tributary of the Amazon, and the latter to the Paraguay. The climate naturally varies with height and exposure, the higher plateaux having hot days and cold nights with bitter winds, the lower plateaux and eastern terraces a temperate climate, the upper valleys a sub-tropical climate, and the

northern and eastern plains (llanos) a tropical climate. The snow-line is about 17,000 ft. The first two regions have wet and dry seasons, the former extending from November to February or March, elsewhere there is rain all the year round, but very uncertain in the distribution of its fall. S E trade winds blow regularly from July to October. The total area is 567,430 m., or including disputed territory, 731,000; the extreme length from N W. to S E about 1660 m., and the extreme breadth at right angles to this about 800 m.

**Communications**—The railway communications are very poor, extending only to about 500 m., but they give outlet to Mollendo in Peru, and to Antofagasta in Chile; and others are in progress to form a junction with the Argentine system, and to give access to the Paraguay. The Beni and Mamore are navigable by vessels of 6 ft. for over 2000 m., but passage to the Amazon is barred by falls on the Madeira. The roads are few and mostly bad, and the great natural wealth of the republic cannot be developed till communication is improved. Bolivia having now no coast has to import and export through the surrounding countries by the seaports of Arica, Mollendo, or Antofagasta, or by the eastern river ports of Puerto Suarez and Villa Bella.

**Resources and Productions**—The upper plateaux produce potatoes, barley, and coarse grass, the lower plateaux wheat and maize, the upper valleys tropical fruits, and the great plains a most luxuriant tropical vegetation. There are valuable timber in the N., open grassy savannahs in the S., copal, rubber, coffee, cacao, coca, rice, cotton, cinchona, pine apples, and bananas. There are large herds of cattle and sheep, and the skins of the guanaco, chinchilla, llama, and alpaca are valuable, while the long soft wool of the vicuña, llama, and alpaca, is highly prized. The llama is also used as a transport animal. There is probably a great future for both cultivation and stock-rearing, but meanwhile the wealth of the country and its industrial prosperity lies in its minerals—silver, copper, tin, lead, mercury, zinc, antimony, bismuth, gold, borax, and coal, but the lack of good transport facilities hampers the working very greatly. The rich copper deposits are hardly touched owing to this, and the washing of alluvial gold is carried on only by Indians, quartz-mining being practically undeveloped. Silver is the great source of wealth, the mines at Potosi, which have been worked since 1645, still producing largely, while there are workings at Oruro equally rich, and at Huanchaca near Potosi twice as valuable. The total annual production is over 11,000,000 ozs. Next in importance to the silver is tin, which is found in most of the silver districts. It is very plentiful in the Huamuni district to the S. of Titicaca. There are large deposits of common salt

and 13° S E. of Milan, has manufactures of silks, velvets, crapes, wax, candles, musical instruments, chemical products, straw hats, leather work, paper, cards, and sausages. The province produces rice and silk-worm cocoons. Area of province, 1418 m. Pop 528,000. Pop of town, 152,000.

**Bolton**, a town in Lancashire, England, 10 m. by rail N W of Manchester. Important centre of cotton manufacture, especially the spinning of fine yarns from Egyptian cotton, muslins, fine calicoes, quiltings, dimities, counterpanes, and hosiery. There are also extensive machinery works, foundries, iron and steel works, chemical works, bleaching works, dye works, and paper mills. Pop 168,205.

**Bombay**, a governorship of British India, embracing the whole coast district on the W from 14° northward, and with an average width of about 200 m. It is bounded N. and N W by Baluchistan; N E by the Punjab, Rajputana, and Malwa, E by Berar, Harderabad, and Madras, and W by the Arabian Sea. The coast line towards the N is broken by the

goods in its own home markets, but has also developed a large export trade. Other industries are silk-rearing and the making of carpets, leather goods, pottery, brass work, cutlery, and jewellery. The mineral wealth of the province is small, coal being unfortunately altogether wanting. Iron and gold are found, but neither is important. The shallow waters of the Rann or Mann of Cutch, opening off the Gulf of Cutch, with an area of 8000 m., yields large quantities of salt. The imports have a value of over £35,000,000 and the exports of over £40,000,000, about two-thirds of the former coming from, and one-fourth of the latter going to, Great Britain. The principal imports are machinery, metals, hardware, coal, petroleum, and liquors, &c, the United Kingdom sending specially, of home manufacture, apparel and haberdashery, books, railway and other carriages and cycles, chemical products; coal, coke, and fuel; cotton yarn and piece goods, tools, linen, engines and machinery, metals (iron, brass, copper, zinc), painters' colours, paper and stationery, provisions, silk

(thrown, twist, or yarn), soap, spirits and beer, umbrellas and parasols, and woollen cloth, and of foreign and colonial merchandise, raw cotton and cotton manufactures, ivory, matches, and wine. The chief exports are cotton, opium, wheat, seeds, wool and woollen manufactures, sugar, fibres, drugs. The principal articles sent to the United Kingdom are coffee, cordage, wheat, raw cotton and cotton waste, drugs, dye-stuffs (myrobalans, indigo, &c.), gums, hemp, raw hides, horns, and hoofs, isinglass, leather, bones for manure, tin, oil-seeds, wool and woollen manufactures (carpets, rugs, &c.). The government includes Aden, the Somaliland Protectorate, and the other British possessions in the Arabian and Red Seas. Area, exclusive of these, 122,984 m. Pop 18,512,000.

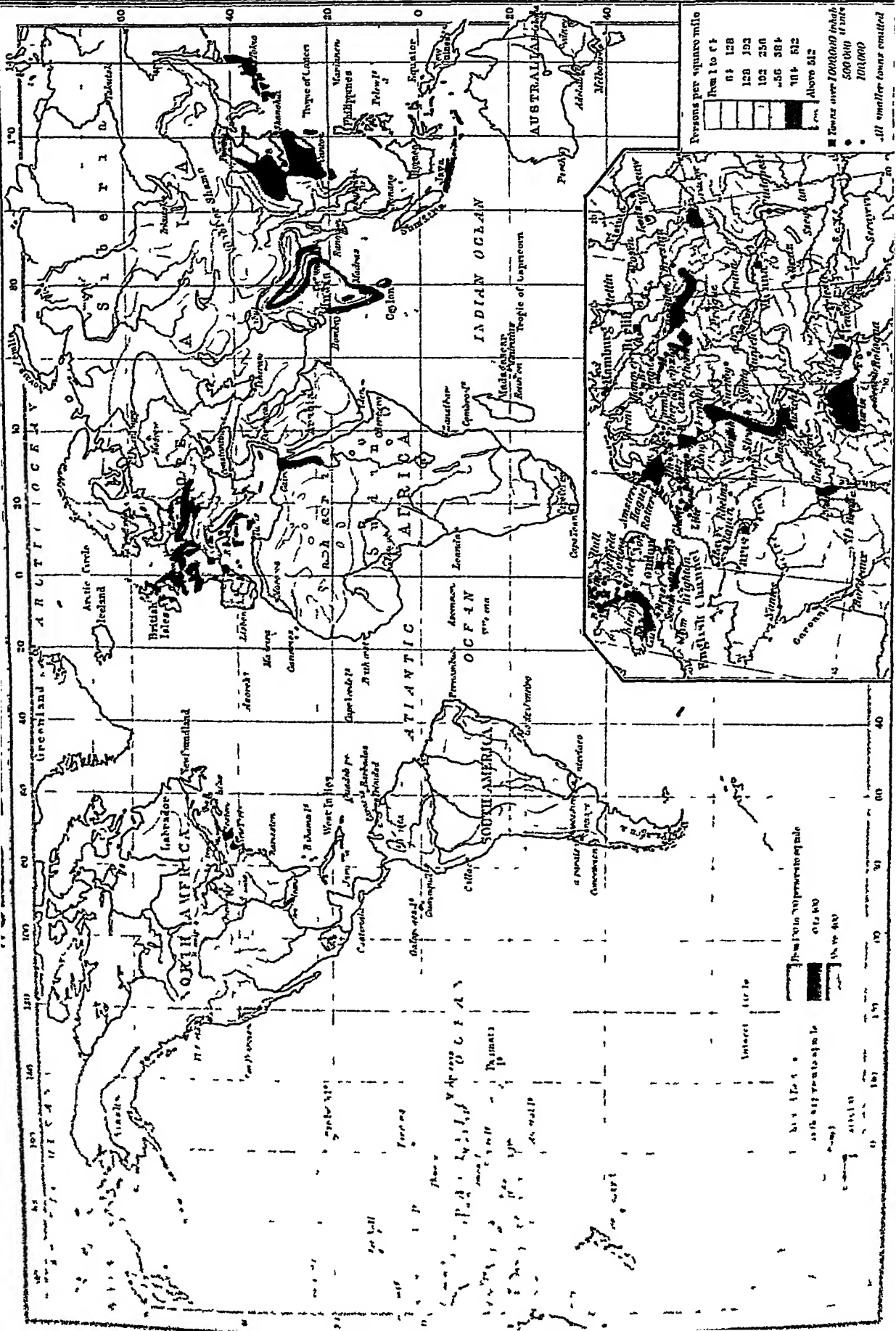
**Bombay**, the chief city and seat of government of the province just described, is near the S end of the island of the same name, lying off the middle of the coast of the province, and connected with the mainland by bridges and causeways for road and rail. It is the most important manufacturing and commercial town in India, having taken full advantage of the magnificent natural harbour inside the island. There is railway communication with all parts of India, and the place is a great centre of cotton manufacture, the other leading industries being dyeing, tanning, and metal work. There are wet docks, with a depth of from 25 to 27 ft. at neaps, and 28 to 30 at springs, and seven dry docks, of which one has a depth of 29½ ft. on the sill at high water of spring tides. The imports and exports are practically those of the province, of which it has over three-eighths of the trade, about five-twelfths of the whole trade of India. By rail it is about 1100 m from Calcutta, and 700 from Madras. Regular communication from London, Liverpool, Hull, and Glasgow. Distance from London, *via* Suez Canal, 6330 m., from Liverpool, 6255, Glasgow, 6365, Aden, 1652, Karachi, 500, Goa, 227, Colombo, 900; and Zanzibar, *via* Seychelles, 2790. Letters, 15 days from London, parcels, *via* Gibraltar, 23 days, *via* Brindisi or Marseilles, 16 days. Time for noon at London, 4 52 P.M. Pop 776,000.

**Bona**, a seaport in Algeria, on a bay of the same name, 85 m by rail N.E. of Constantine, and 220 m W. of Tunis. Important iron and copper deposits in neighbourhood, good harbour with a depth of 21 ft. at quays, imports general goods, exports iron, copper, zinc, lead, phosphate, wool, cork, tannin, esparto, coral, and wax. Regular communication from London. Distance to London, 1970 m., Glasgow, 2000. British vice-consul. Pop 32,000.

**Bonn**, a town on the left bank of the Rhine, in Prussia, 21 m by rail S.E. of Cologne, has small manufactures of chemicals, earthenware, and jute, school of agriculture. Pop 51,000.

**Bonny**, the eastern mouth of the Niger, in Nigeria, depth on bar at low water 17 ft., with rise of 5 ft. at neaps, and 6 ft. at springs, anchorage in 10 fathoms inside. Also town on E side. Imports general goods, and exports palm kernels and oil, ivory, coffee, and kola nuts. London, 4170 m.; Glasgow, 4203.

**Bordeaux**, the chief town of the department of the Gironde, S.W. France, on the left bank of the Garonne, 60 m from its mouth, and 360 m. by rail S.W. of Paris. The district around abounds in vines, fruit, and grain—the production of claret, Burgundy, and brandy being very extensive and important—while great tracts in the Gironde and Landes are covered with the forests from which come the pitwood and resinous products so largely exported from Bordeaux and Bayonne. Along the Pyrenees and in Charente-Inférieure there is grazing country, and in the Pyrenees considerable wealth not yet by any means fully developed. The preserving and tinning of fruits and vegetables is an important branch of industry, and British tin-plate is preferred to the home-made article as being both better and cheaper. Business might also be done in connection with the development of woollen factories along the sheep districts of the Pyrenees, and in the introduction of reaping machines and other agricultural machinery and implements in the many parts suitable for their use, in the valleys of the Pyrenees particularly. In the agricultural machines and implements American manufacturers are superseding British; because British firms will not study the requirements of the peasantry as to the shape, size, weight, &c., of the ploughs and other implements necessary for the land with which they have to deal. Of a total export of some 15,300,000 gallons of wine in wood, and about 1,000,000 gallons in bottle, nearly a quarter of the former and nearly half of the latter goes to the United Kingdom. A new canal is projected to connect Bordeaux with Narbonne. There is a dock with a depth of 22 ft. at low water, and vessels up to 20 ft., or at spring tides to 24 ft., can ascend the river. The chief imports from the United Kingdom are wool, rice, pure oils, and gums; cotton tissues and raw cotton, hemp, and jute, rags, beer, spirits, coal and coke, coal tar, iron and steel (tin-plate, &c.), lead, chemicals (spraying materials, &c.), pottery, machinery, and hardware, from other countries, hides, animal grease and lard (United States and South America), cheese (Switzerland), salt and preserved fish and fish oils, oil seed (largely from Senegal), grain, sugar, coffee, cacao, tobacco, raw rubber, timber, fibres, bran, wines (from Spain for blending), rum (from Guadelope and Martinique), copper, and glass. The chief exports to the United Kingdom are hides, wool, fish (fresh and preserved, mostly oysters and sardines), chestnuts, table





fruits (fresh and dried—plums, prunes, walnuts, gherkins, capers), sugar, coffee, oils, gums, resins and resinous oils, pitwood, prepared corks, vegetables (fresh and preserved—peas, beans, &c.), rags, wines, brandy, slates, chemicals, talc, pottery and porcelain (largely from Limoges), glass, paper and cardboard, basket work, straw envelopes for bottles, and manganese, to other countries, feathers and down, salted cod-fish, tinned sardines, rice, preserves and jams, turpentine, raw cork, perfumery, cottons, prepared hides, jewellery, machinery, hardware, vehicles, and cycles. Regular communication from London, Liverpool, Glasgow, Hull, Bristol, and Manchester. Distance from London, 765 m. Letters, 20 hours, parcels, 40 hours. British consul. Pop with suburbs, 305,000.

Borneo, a large island (the third largest in the world, surpassed only by Australia and New Guinea) of the Eastern Archipelago, between Australia and French Indo-China, and immediately to the N of Java. It lies roughly between 7° N. and 4° S, and between 109° and 119½° E, and has an extreme length from N. to S. of over 800 m., and a breadth, to the N. of the equator, of over 600 miles. It is bounded E by the Mindoro and Celebes Seas and the Macassar Strait; S by the Java Sea; and W. and N.W. by the China Sea. About two-thirds of the island in the S.E. and S. are claimed by the Dutch, while the N. and N.W. (the states of North Borneo, Brunei, and Sarawak, and the small island of Labuan, off the coast of Brunei) belongs to Great Britain. The back-bone of the island is a ridge running from N.E. to S.W., with a height of some 8000 ft. at the north-eastern end, falling to 3500 ft. towards the S.W., and Kinabalu in a separate range in the extreme N. reaches a height of 13,700 ft. The interior is mountainous, with rich river valleys and marshy plains, and the coast is low and swampy, with wide flat stretches formed by the alluvium brought down by the numerous rivers. Good bays and inlets are by no means numerous, the best being in Brunei and British North Borneo, and the river mouths are obstructed by bars; while the navigation of the streams themselves, which form the great means of communication, is interfered with by rapids and shallows. The construction of railways has been begun. The mean annual temperature varies of course with height, but is about 80° Fahr., and the rainfall is heavy, the average being probably nearly 120 in. The rainy season is from November to May. The natural vegetation is luxuriant, and the forests produce ironwood, teak, sandal-wood, ebony, india-rubber, damar, camphor, pepper, cloves, nutmegs, cinnamon, ginger, betel-nuts, sago, cocoanuts, gambier, bamboo, canes, fibres, &c., &c. Cultivated for use and export are rice, sugar-

cane, sago, tapioca, coffee, earth nuts, indigo, maize, hemp, cotton, and tobacco, but the cultivation products of most value in the British part are pepper, gambier, sago, and rice. The island is very rich in minerals, but the working of these is still undeveloped. Coal, iron, and gold are plentiful, and antimony, quicksilver, platinum, &c., are also found. There are diamonds in both British and Dutch portions. Edible birds-nests are found in considerable quantity, and trepang, pearls, and tortoise-shell are obtained along the coast. The chief Dutch exports are given under Banjermasin, and those from the British part are timber, cane, gutta-percha and india-rubber, sago, gambier, pepper, coal, gold, seed pearls, and edible birds-nests. The imports are general goods, clothing, machinery and hardware, opium, rice, and oils. The imports of the British portions reach probably a million pounds in the year, and the exports are valued at about the same sum; but the development of the whole region is only beginning. The total value of the commerce has increased five-fold within five years. The bulk of the trade is with Singapore and Hong Kong. The chief town of Sarawak is Kuching, of Brunei, Brunei, and of British North Borneo, Sandakan. The currency is a silver dollar worth 2s, and the cent is the hundredth part of this. Local weights, a picul = 133½ lbs avoirdupois; a catty = 1½ lb.; a tahl = 1½ oz.; a bongkal = 832 grains troy; a tampin varies from 80 to 100 catties. Mails from London twice a week, postage to the British parts 1d per half-oz; postcards, 1d., telegrams to Labuan, 4s 10d, *via* Turkey, 5s by other routes; to the other British settlements, 5s, *via* Turkey, and 5s 3d. by other routes, to Dutch Borneo 5s 3d, *via* Turkey, and 5s 5d by other routes. British consul-general and consul at Brunei, and consular agent at Sandakan. Regular communication from Liverpool and Glasgow. Distance from Singapore to Kuching, 375 m., from Kuching to Labuan, 412 m.; from Labuan to Sandakan, 305 m.; from Hong Kong to Labuan, 1000 m. Area of whole island, 284,000 m., of Sarawak about 50,000 m., of Brunei about 15,000 m.; and of British North Borneo about 31,000 m. Pop about 2,000,000, of whom about 600,000 are in British territory.

Bornholm, an island belonging to Denmark in the Baltic, off the S.E. coast of Sweden, with a hilly surface, and steep, rocky, and dangerous coast. Produces porcelain, clay, sandstone, limestone, blue marble, and coal. Imports coal, timber, and pig-iron; exports oats, bricks, ironware, terra-cotta, majolica, and the products noted above. Distance from London, 820 m.; Leith, 715. British vice-consul Area, 225 m. Pop 39,000.

Bornu, a large state of central Africa, lying to the W. and S of Lake Chad. The surface

is flat with branches of the Komadugu River, flowing to Lake Chad. Very hot and unhealthy climate. Produces indigo, maize, millet, cotton, and ground nuts, and imports calico, sugar, and salt. Area of the state estimated at 57,000 m. Pop estimated at 5,000,000.

**Borrowstouness, or Bo'ness**, a seaport in Linlithgowshire, Scotland, on the Firth of Forth, 3 m. N. of Linlithgow, with coal mines, blast-furnaces, chemical works, brick works, saw mills, salt-refining, foundries, and machine works. Depth of water in the tidal harbour 10 to 14 ft at ordinary spring tides. On the sill of the dock 22 ft at high water of ordinary spring tides. Imports timber, esparto grass, iron ore, sulphur ore, wood pulp, exports coal, pig-iron, and fireclay bricks. Pop 9306.

**Bosna-Serai, or Sarajevo**, the chief town of Bosnia, on high ground above the Bosna R., 166 m. by rail S.W. of Bosna-Brod on the Danube, and 100 m. by rail E. of Metkovich on the Adriatic. Has manufactures of articles of copper and wood inlaid with gold and silver, brass ware, cotton, and tobacco. British consul-general. Pop 30,000.

**Bosnia and Herzegovina** (including Novi-Bazar), provinces in the extreme S. of Austria-Hungary, between Servia and Dalmatia, and with Montenegro immediately to the S., really forming part of the Turkish empire, but under the administration and military occupation of the dual monarchy since the Berlin Treaty of 1878. The range of the Dinaric Alps runs through the district from N.W. to S.E., the surface sloping from this north-eastward to the basin of the Save and south-westward to the Adriatic. The southern districts, Herzegovina and Novi-Bazar, are bare and rocky, but Bosnia to the N. is beautiful, with mountain forests and fertile valleys. About 45 per cent. of the surface is under wood—lime, beech, pine, and larch, the supply of oak, formerly much used for the manufacture of oak staves, has been exhausted. Cattle, sheep, swine, horses, and mules are reared in large numbers, and are exported to the value of some £300,000 every year, while sheep skins and goat skins are sent in considerable quantity to the United Kingdom, the United States, and Hungary, and lamb skins and kid skins to France. The chief crops are tobacco, grain, fruit of all kinds (especially plums), grapes (for wine), beet, flax, and hemp, and all these are exported as well as timber, sugar, wool, eggs, bark, gall-nuts, salt, alkies, and a small number of marten, fox, polecat, badger, and hare, skins (to Germany and America). Nearly 90 per cent. of the people are concerned in agriculture. Minerals are fairly abundant, but only coal, iron, copper, and manganese are worked in any quantity, and the value of the iron and steel, iron and steel wares, and copper and copper

work, along with the salt from Dolna Tuzla is nearly £400,000 a year; but the industries are of only local importance. Efforts are being made to introduce silk-culture. There is railway communication with Brod on the Danube and with Gravosa on the Adriatic, the total railway mileage being nearly 600. The industries receive aid from the government through technical education, the importation of superior breeds to improve stock, &c. The chief imports are fatty substances, oils, coffee, sugar, grain, flour, and rice, beer, wine, and spirits, petroleum and other mineral oils, wool, cotton yarn and cloth, silk, paper, leather and leather goods, furniture; glass, china, and earthenware; iron wares, machinery, soap and candles, clothing and haberdashery, and matches. British consul-general at Bosna-Serai (Sarajevo). Area, 23,262 m. Pop 1,670,000.

**Bosphorus, or Bosporus**, sometimes also called the Straits of Constantinople, channel separating Europe and Asia, and connecting the Black Sea with the Sea of Marmora. It is about 18 m. in length, and has a breadth varying from a half to 2 m. The depth is about 20 fathoms. It is freely open to merchant vessels, but no ship of war belonging to any country except Turkey is allowed to pass through without the consent of the Turkish Government.

**Boston**, a seaport in Lincolnshire, England, 30 m. by rail S.E. of Lincoln and 170 m. N.E. of London, and lying along both banks of the Witham, 5 m. from its mouth, and 26 m. E. by N. of Grantham. It manufactures sailcloth and sacking, has iron foundries, agricultural implement works, and shipbuilding yards; and trade has been greatly improved since the dredging of the river in 1881, and the formation of the new dock in 1884. On the sill of the dock the depth of the water at ordinary spring tides is 25 ft., and the roadstead has a depth of 26 ft. at low water of spring tides. Imports timber, pit props, iron, linseed, cotton seed, grain, wool, and general goods, exports oats, coal, machinery, and agricultural implements, considerable fishing trade. *Via* the Kaiser Wilhelm Canal it is the nearest port to the timber-exporting districts of the Baltic. The town has excellent communication by river and canals. Pop 15,667.

**Boston**, the chief town of Massachusetts, on Boston Harbour at the mouth of the Charles and Mystic Rivers, 230 m. by rail E.N.E. of New York. It is a great railway centre, and a number of lines of ocean steamers ply regularly to foreign ports. It has a large harbour with a depth of 27 ft along the quays and 23 ft. at mean low water in the channel. There are three graving docks varying in length from 165 to 465 ft. The chief imports are wool and woollen manufactures, chemicals, iron and steel manufactures, leather and leather manufactures, wood and wood manufactures,

fruit, fish, and paper stock; and the chief exports provisions, including animals (Boston being the leading port in the shipment of live cattle), bread-stuffs, cotton and cotton manufactures, leather and leather manufactures, iron and steel manufactures, wood and wood manufactures, and spirits. The provisions and bread-stuffs consist mostly of flour, wheat, oats, Indian corn, and barley, and of these about nine-tenths are sent to British ports. The import of fish, largely from New England, consists mostly of salt mackerel, cod-fish, herring and blotters, hake, haddock, &c.; of canned fish, lobsters, &c., of fresh fish, mackerel, smelts, frozen herring, live lobsters, &c. Of a total export and import trade of about £39,000,000, nearly £25,000,000 is with Great Britain. The foreign trade has a tonnage of 4½ millions, of which over 3,000,000 are carried directly, and nearly 50,000 indirectly, in British bottoms, and there is a coasting trade of about 16½ million tons. There is a large import of fruit from the Mediterranean, and an export trade in fish to Spain. Boston is a great woollen centre, supplying raw material for the carpet industries of a number of towns in the neighbouring districts, and, that being so, it has naturally an increasing commerce with Australia. Regular communication from London, Liverpool, Newcastle, and Hull. Distance from London, 3030 m., Liverpool, 2955; Glasgow, 3065, Cardiff, 2900. Letters, 9 days. British consul-general. Pop. 561,000.

**Bothnia, Gulf of**, a long narrow extension of the Baltic stretching northward 420 m., with an average width of about 100 m. The depth is from 20 to 50 fathoms, but navigation is difficult on account of many small islands, rocks, and shoals.

**Bouches-du-Rhône**, a coast department in S E France, with a surface sloping from the maritime Alps S and W. to the flat ground of the Rhone delta. It is drained by the Rhone and Durance, and intersected by the Canal d'Arles and other important waterways. A number of lagoons called étangs, connected with the sea by natural or artificial channels, form salt pans which yield a great quantity of salt. There is also a large production of wine, brandy, sugar, olives, mulberries, almonds, and figs. There are beds of lignite, which are worked on a considerable scale, and the great plain of La Crau provides for half the year good sheep pasture of a peculiar kind, which gives the sheep fed on it wool of a finer staple than usual. Area, 1971 m. Pop. 734,500.

**Boulogne-sur-Mer**, a seaport in the department of Pas-de-Calais, N France, on the English Channel, 158 m. by rail N N W of Paris, and 27 m. S W of Calais, 28 m. from Dover, and 29 m. from Folkestone. From either of these the crossing takes about two

hours; steamers from Folkestone twice a day, and regular communication also from London and Goole. Manufactures linen, rope, iron, steel pens, buttons, oils, and chemicals. The port is the great French station for the North Sea fisheries, the fish caught having an annual value of about £600,000. There is an outer harbour, sheltered by Cape Grisnez and the great Carnot breakwater, with a depth of 30 ft., and an inner harbour with a depth of 14 ft. at low water of spring tides, and a dock admitting vessels of 22 ft. at neap tides, and of 28 ft. at stream tides. The chief imports are salt, pork, mother-of-pearl shells, horns and bones, coal, iron ore, steel bars and plates, machinery, flax, hemp, cotton, wool, goats' hair, linen, cotton and woollen tissues; jute goods, carpets, skins and hides, and wood. Exports live pigeons and dead poultry, eggs, fresh flowers, potatoes, fresh and dried fruits, fresh vegetables, condensed milk, wines in casks and bottles, cement, glass ware, linen, cotton, wool, and silk, goods; paper and cardboard, leather, wooden goods, fancy articles, and wool. Of a total trade of nearly 3,000,000 tons about one-third is carried in British bottoms. British vice consul. Pop. 50,000.

**Bourges**, the chief town in the department of Cher in the Loire basin, central France, 140 m. by rail S of Paris, and 70 m. S E of Orleans. Has a military arsenal with a foundry for cannon, and has also a small trade in hemp, cloth, leather, and agricultural produce. Pop. 47,000.

**Bourke**, a town on the S bank of the Darling R., 503 m. by rail N W of Sydney, steamers from Adelaide, important centre for commerce for Queensland, South Australia, and Victoria. The district is mainly occupied by sheep and cattle stations, and there is a large supply of underground water, which renders irrigation possible. In the southern portion are rich deposits of copper and other minerals. Pop. 2614.

**Boyacá**, a department in the centre of south-eastern Colombia, South America, along the Venezuelan border. Famous for its emerald mines, of which the Mudzo and Cuscuez have produced the finest in the world. The Somondoco also promises good results. There are brine springs, coal, iron, graphite, and copper. Area, 33,351 m. Pop. 702,000.

**Bradford**, a town in the West Riding of Yorkshire, England, on a tributary of the Aire, 9 m. by rail W of Leeds, 34 S W of York, and 191 N N W of London. There is canal communication with Leeds and Liverpool. It is the great English centre of the spinning and weaving of worsted yarn, and the great mart for the long wools used for worsted fabrics. It has also silk, velvet, and plush, works, and in the neighbourhood there are considerable manufactures of alpaca and

mohair, as well as large and important iron works, and the manufacture of machinery. It has the only "conditioning-house" in this country, established by the Corporation in 1887, and there raw wool, and woollen yarns and piece goods, are tested and certified for weight, measure, and condition Pop 279,809

Bradford-on-Avon, a town in Wiltshire, England, on both banks of the R Avon, 7 m. by rail S E of Bath, and 29 N W of Salisbury Other communication is provided by the Kennet and Avon Canal. Manufacture of broad-cloth. Pop 4514.

Braga, the chief town of the province of Minho, Portugal, 34 m. by rail N E of Oporto Manufactures linen, cutlery, jewellery, hats, &c. Pop 23,000

Brahmaputra, one of the great rivers of Asia, rising in all probability in Lake Manasowar, on a great tableland N of the Himalayas in Western Tibet, and close to the head waters of the Sutlej and the Indus It has a course eastward of about 1000 m on the plateau, and then turning abruptly to the S E. crosses the Himalayas and passes through Assam to join the Ganges, the total length being about 1800 m., and the area of the basin about 380,000 m. It is navigable for steamers for about 800 m. as far as Dibrugarh, between which point and Calcutta there is regular steamer communication. Boats of large size go as far as Gauhati in Assam. In the rainy season the river overflows many hundreds of miles of country, and rises 30 to 40 ft above its ordinary level. The whole district thus flooded does not require any further irrigation, and produces heavy crops of rice, jute, and mustard. Tea, timber, oil-seeds, jute, rice, and tobacco are sent down the river, and return cargoes consist of cotton goods and general merchandise.

Braila, a river port of Roumania, on the left bank of the Danube, about 125 m from the mouth of the Sulina branch of the river, 10 m. up from Galatz, and 142 m. by rail N.E. of Bucharest. It is the principal outlet for the products of southern Roumania, and exports large quantities of wheat, rye, oats, rape seed, barley, beans, millet, maize, linseed, mustard, flour, and bran; imports coal, agricultural machinery, and general goods. Of a total trade of about 640,000 tons, over 160,000 were British. British vice-consul. Pop 58,000

Brandenburg, a province of central Prussia, in the great North German plain, well watered by the Oler and its tributaries, and the Elbe with the Havel, Spree, and other tributaries; and with a large number of canals connecting these streams, of which the principal are the Friedrich-Wilhelm, Ruppiner, Finow, and Plauen. Large numbers of sheep are kept, and the wool is said to be the finest in Prussia. There are many distilleries, and other manufactures are

cotton, woollen, and linen, fabrics; iron and steel ware, sugar, glass, and tiles. The chief town, also Brandenburg, on the Havel, 38 m W S W. of Berlin, and about half-way between the capital and Magdeburg, is an important transit centre, with manufactures of woollens, linen, hosiery, silks, hats, paper, leather, and starch. Area of province, 15,381 m. Pop 3,105,000. Pop of town, 38,000

Brantford, a town and river port, Ontario, Canada, 25 m. by rail S W. of Hamilton. It is connected by canal and by the R. Grand with Lake Erie. Railway junction, and manufactures stone ware and agricultural implements. Pop 17,000

Brass River, one of the mouths of the Niger, in the British Niger Protectorate, 18 to 25 ft of water on the bar at spring tides. Anchorage, 5½ m. up, in 6 fathoms, imports spirits, beads, hardware, tobacco, and salt; exports palm oil, kernels, cocoa-nuts, copra, &c.

Brazil—*Surface and Size.*—Brazil, a great republic of South America, occupying nearly half of the continent, and little less in area than the whole of Europe, lying between 4½° N and 34° S and between 35° and 73° W., and with an extreme length of about 2600 m., an extreme breadth of about 2700, and an area of about 3,220,000 m. It is bounded N by Colombia, Venezuela, and British, Dutch, and French, Guiana; N E by the North Atlantic Ocean, S E by the South Atlantic Ocean, S W. by Uruguay, the Argentine Republic, Paraguay, and Bolivia; and W by Peru, Ecuador, and Colombia; thus touching every other South American country except Chile. The whole of the north-western part is occupied by the enormous basin of the Amazon and its tributaries, while the S W is in the basin of the Paraguay, both of which areas have a large amount of low swampy land so unhealthy and covered with wood and jungle as to be almost uninhabitable. The eastern and south-eastern portion is occupied by a great plateau with an average elevation of over 1500 ft., and by a higher tableland cut up by deep valleys so as to have the appearance of a series of mountain ranges, some of them reaching a height of over 7000 ft. These, running parallel with the Atlantic, render communication between the coast and the interior very difficult, and cause most of the rivers to flow N. to the Amazon system, or S to the Paraguay. A large proportion of the country is still unexplored. The chief tributaries of the Amazon are the Japura and Rio Negro from the N, and the Jurna, the Purus, Madeira, Tapajoz, and Xingu from the S. The Tocantins-Araguaya flows northward and enters the sea near the mouths of the Amazon, and the San Francisco cuts across the eastern ranges, and enters the sea between Maceio and Aracaju. The Paraguay, Taquary, and Paraná drain the S. The Madeira

and all the rivers E of it, as well as the Paraná and its tributaries, flow through the tableland and hills, and have their navigation interrupted by falls and rapids, while the others are navigable for long distances. The Amazon and its tributaries drain about half of Brazil, and the southern rivers about one-fifth. In a country of such enormous extent the climate varies greatly, but the mean temperature at ordinary levels ranges between 63° Fahr (in the S) and 79°, and the rainfall from 50 to 90 or more in.

*Government, &c*—The republic consists of a federal district and twenty federated states. The president is elected by direct vote and holds office for four years, and legislative power lies with the National Congress, composed of a Chamber of Deputies and a Senate. The pop is about 15,000,000. The coast line has an extent of some 4000 m, and the navigable waters of the interior reach a total of 34,000 m. Road communication is poor, but the railways, which have now a length of some 12,000 m, are being constantly extended.

*Resources and Productions*—The timber and other vegetation of the great tropical forests, along the Amazon and elsewhere, is most valuable, and the variety of species almost bewildering—caoutchouc, fibre-plants, nuts, furniture woods, dye-woods, drug plants, &c, &c, being numerous and abundant. The cultivated products include coffee, sugar-cane, tobacco, cotton, maté, india-rubber, cassava, cinchona, cacao, and vines, while in the three southern inland provinces there are great herds of cattle. Minerals are abundant, but quite undeveloped except gold working. In the S there are great beds of coal, lignite, bituminous schist, and peat, and silver, iron, lead, copper, manganese, and quick-silver also occur in various districts in the same part of the country. There are valuable diamond mines in Minas Geraes, Bahia, San Paulo, and Matto Grosso, and of other precious stones in several parts of the S. Other deposits which will ultimately be of great value yield saltpetre, rock salt, mineral oil, and china-clay.

*Manufactures*—Brazil is meanwhile largely an agricultural country, with an infinitesimal part of its surface as yet under cultivation, but a few industries have been established, and, aided by a very high protective tariff, have made some progress. As a necessary consequence all goods of this class are excessively dear, the customs duties enabling prices to be artificially kept up to the extent of nearly 50 per cent. The chief industrial occupations are cotton spinning and weaving (well scattered up and down the coast states), woollen manufactures (cloth, flannel, felts, rugs, &c), silk weaving, flour mills, fruit preserving, distilling, brewing.

*Commerce*—The total value of imports is about £22,000,000 a year, of which over 31 per cent. come from the British Empire, 13½ from the Argentine, 12½ from the United States,

and between 9½ and 6 from each of Germany, France, Uruguay, and Portugal. Over 40 per cent. enter by Rio de Janeiro, and over 20 per cent. by San Paulo. The chief articles are food-stuffs, coal, and coke, cotton goods, and cotton (all between \$1,500,000 and £1,000,000); machinery of all kinds (over £500,000), jute yarn, iron and steel manufactures, other metals, &c. (copper, zinc, lead, tin, and tin-plate), woollens and wool, chemical products, earthenware (with stoneware and porcelain)—all between £500,000 and £100,000; paints and varnish, linens, oil and grease, rubber goods, cutlery, furniture, leather manufactures, and stationery and books. The exports vary considerably in value, but may be taken at some £40,000,000, of which nearly 60 per cent. is coffee, of which Brazil supplies six-sevenths of the whole consumption of the world. Over 21 per cent. is rubber, and the chief other articles are tobacco, sugar, cocoa, maté, gold, hides, and cotton. Manganese will be important when transport facilities are greater. The United States takes some 42 per cent. of the whole export, Germany 15 per cent., the United Kingdom 12½, and France 11½. The United Kingdom takes over 60 per cent. of the rubber. The chief imports received from the United Kingdom are of home merchandise, cotton yarn and cloth, coal, &c, metals (iron, brass, copper, lead, and tin), telegraph wire and apparatus, machinery, ships and boats, jute yarn and piece goods, woollen cloths, implements and tools, alkali, apparel and haberdashery, arms, ammunition and military stores, manufactures of caoutchouc, railway carriages, cement, chemical products, china and earthenware, hardware and cutlery, leather (wrought and unwrought), linen, painter's colours and materials, foreign and colonial merchandise, rice, rice meal and flour, cheese, butter and margarine, and condensed milk. The chief exports sent to the United Kingdom are caoutchouc, raw cotton, cotton and other oil-seeds, manganese ore, cocoa, raw coffee, nuts, raw hides, isinglass, piassava and other fibres, unrefined sugar, and furniture woods. British consul-general at Rio de Janeiro, consuls at Bahia, Pará, Pernambuco, Rio Grande do Sul, Porto Alegre, and Santos; and a number of vice-consuls. Letter postage from the United Kingdom, 2½d per half-oz., postcards, 1d, telegrams, 3s to 5s 7d according to part. Mail from London about every 5 days, reaching Pernambuco 14, Bahia 16, and Rio de Janeiro 17 days later.

*Money, &c*—The standard is supposed to be gold, but in reality there is very little gold or silver coinage in the country, the circulating medium being inconvertible paper, with smaller coins of nickel and bronze. The business unit is the milreis, 1000 reis, nominally worth 2s 2½d, but in reality in paper worth only

from 6d. to 8d. The gold coin is the 10 reis piece, and the silver the 2 reis piece. The metric system (*see* France) is compulsory, but the old weights and measures are still largely used. They were—the libra=1.012 lbs avoirdupois, arroba=32.38 lbs, quintal=129.54 lbs, alqueire=1 bushel, and oitava=55.34 grains, a pipe of alcohol=106 gallons, a barrel of flour=196 lbs; a drum of cod fish=128 lbs; a bag of sugar averages 165 lbs., and a bale of cotton the same. The Brazilian flag has a green ground with, in the centre, a yellow lozenge, bearing a blue sphere with stars, and crossed by a white band, on which is the motto *Ordem e progresso*.

Brazzaville, a station in the French Congo, at the lower end of Stanley Pool.

Brechin, a town in Forfarshire, Scotland, on the left bank of the South Esk, 8 m. by rail W. of Montrose. Manufactures linen, sail-cloth, and paper, and has spinning and bleaching industries. Pop 8941.

Brecknockshire, an inland county of South Wales. Iron, coal, and limestone in the S and the W. County town, Brecon or Brecknock, on the Usk, has manufactures of flannels, coarse woollens, and hats, and is connected by the Brecon and Abergavenny Canal (vessels of 3 ft. draft), *via* the Monmouthshire Canal, with the Bristol Channel. Area of county, 475,224 acres. Pop 59,906. Pop of town, 5875.

Breda, a town in North Brabant, Holland, on the Mark, 60 m. by rail N.E. of Flushing, and 30 N.E. of Antwerp; canal communication with the Maas, and manufactures of carpets, linen, hats, leather, and soap. Pop 26,500.

Bremen, one of the free cities of Germany, on the R. Weser, some 65 m. from its mouth, 39 m. by rail S.S.E. of its outport, Bremerhaven, and 75 m. N.W. of Hanover. The largest vessels can now ascend the river at high water, and the docks have a depth of 26 ft. The town manufactures woollens, cottons, cigars, and paper, and has large breweries, distilleries, sugar refineries, jute mills, and oil mills. It is the natural outlet and inlet of the Weser basin. It has besides excellent water and railway communication with the whole of western and central Germany, and therefore takes rank as the second commercial city of Germany. Its great foreign trade is with the United States, from which it receives about one-third of its imports, and to which it sends about one-tenth of its exports, and it also does a large trade with South America, Great Britain, Asia, and Australasia. The trade in tobacco, rice, cotton, indigo, wool, and petroleum, is particularly large. Of a total import of £54,000,000, about £2,500,000 are sent from the United Kingdom, and of a total export of about £52,000,000, £3,250,000 are sent to the United Kingdom. The principal articles imported from Great Britain are cotton manufactures, wool, coal,

drugs, gum, furs; cotton, woollen, and linen yarn; machinery, coffee, leather, iron and iron ware, hemp, linseed, and fish. The principal articles sent to Great Britain are sugar, glass ware, wool, copper, skins, yarn, leather, cotton and cotton manufactures, wool and woollen manufactures, paper manufactures, china, toys, beer, hops, rice, starch, oil-cake, drugs, and colours. Of both imports and exports about half consists of raw materials. Of a total tonnage, entering and clearing, of about 5,000,000 tons, one-tenth is British, three-fifths belong to Bremen itself, and one-seventeenth to other ports of Germany. In winter the water-way is kept open by means of ice-breakers. Regular communication from London, Hull, Leith, Plymouth, and Southampton. Distance from London, 430 m.; from Hull, 374; from Leith, 513. Letters, 19 hours; parcels, 25 hours. British vice-consul. Pop 163,500.

Bremerhaven, the outport of Bremen, 29 m. farther down the river. It shares in the general trade of Bremen, and has five wet docks with a depth of 18 to 26 ft. There is a dry dock 656 ft. long with 34 ft. depth on sill. Over 100 steam trawlers and several steam liners belong to the port, and there is a large fish trade. British vice-consul. Pop 20,500.

Brescia, a city of Lombardy, Italy, 51 m. E.N.E. of Milan, with manufactures of woollens, silk, linen, paper, leather, arms, cutlery, and iron ware. Pop 71,000.

Breslau, chief town of Prussian Silesia, on the Oder, 150 m. by rail S.E. of Frankfort-on-Oder. Has a great trade in cereals, wool, linen, coal, metals, timber, hemp, and flax. Is the centre of an extensive manufacturing district with important railway communication in every direction, besides water communication on the Oder and its connected canals. Nearly half the population is concerned in industrial pursuits, the leading manufactures being beet-sugar, linen, woollen, cotton, and silk, weaving; the making of machinery, earthenware, soap, starch, and distilling. There is a large trade in lumber. Parcels, 2 days 4 hours. British consul. Pop 423,000.

Brest, a great naval station and port of refuge in the department of Finistère, France, 390 m. by rail W. of Paris. There is an outer harbour with a depth of 27 ft. at low water, and five inner basins varying in depth from 7 to 31 ft. Of a total import of over £500,000, nearly £135,000 is from the United Kingdom, and of an export of nearly £108,000, nearly £106,000 is sent to the United Kingdom. Of a total tonnage of over 100,000 tons entered and cleared with cargoes, nearly one-half was British. The principal imports are coal, wine, timber, coffee, manures, and tar. The principal exports are fruit, pyrites, and vegetables. Regular communication from Hull. British consul. Pop 84,500.

**Bridgeport**, a town in Connecticut, United States, 57 m N.E. of New York, with manufactures of sewing-machines, metal cartridge-cases, and machinery. The harbour, on Long Island, takes vessels drawing 21 feet at high water. Imports lumber, wood-pulp, salt, and cork. Pop. 71,000.

**Bridgewater Canal**, the first canal in England, 42 m. long, connecting the Rochdale Canal at Manchester to the R. Mersey at Runcorn above Liverpool, and sending off branches to the Leeds and Liverpool Canal and the Trent and Mersey Canal. Navigable throughout by boats with a draught of 4 ft.

**Bridgwater**, a town in Somersetshire, England, on both sides of the Parret, 12 m. up the river from the Bristol Channel and 29 m. S.W. of Bristol. There is a canal to Taunton. Bridgwater is the only place where bath or scouring bricks are made, the material being a mixture of sand and diatom mud found along the river. Pop. 15,209.

**Brieg**, a town in Prussian Silesia, on the left bank of the Oder, 26 m. by rail S.E. of Breslau. Manufactures machinery and iron ware, thread, sugar, and tobacco. Pop. 24,000.

**Brindisi**, a seaport in the province of Lecce, South Italy, 345 m. by rail S.E. of Ancona, and 39 m. E.N.E. of Taranto. By sea it is 388 m. from Venice, about the same distance from Trieste, and 920 from Port Said. Vessels drawing 26 to 27 ft. of water can lie alongside the quay, the port being, since the opening of the Mont Cenis and other railroads, a great point of departure for India and other parts of the East. The railway journey from London is about 60 hours, and steamers reach Port Said in about 3 days from Brindisi. The chief imports are coal, flour and grain, sulphate of copper, petroleum, colonial goods, and animals. Of the coal, by far the greater amount comes from the United Kingdom, but during the high price ruling for Cardiff coal in 1900, American coal and patent fuel competed successfully at this port. The chief exports are silk waste, figs, wine, coral, olive oil, argols, and wine lees. Of total imports of over £500,000 the United Kingdom sent more than half, other parts of Italy £177,000. Of total exports of £400,000, the United Kingdom receives none, other parts of Italy receive £221,000, British India over £111,000, Austria-Hungary over £46,000, and Egypt over £14,000. Of a total tonnage entered and cleared of over 2,250,000 tons, 128,000 were British, and more than half Italian. Letters, 60 hours, parcels, 5 days. British consul. Pop. 17,000.

**Brisbane**, the capital of Queensland, and chief seaport and trading centre of that colony, 25 m. up the river of the same name from Moreton Bay. In direct line it is about 500 m. N. of Sydney, but by railway is distant 723 m. By sea it is 510 m. from Sydney, 610

from Townsville, and 1260 m. from Torres Strait. It is connected by rail not only with Sydney, but also with Melbourne and Adelaide, and from it a railway runs westward 604 m. into the interior to Cunnamulla. By cutting and dredging, the bar and river channel have been so improved that there is now a depth of 22 ft. at dead low water, and the largest vessels can enter, pass up, and lie alongside the wharves. The imports consist of general goods, and the principal exports are gold, wool, cotton, sugar, tallow, and hides. Regular communication from London, Liverpool, and Glasgow. Distance from London, 11,800 m. Letters, 34 days; parcels, 45 days. Time for 12 noon at Greenwich, 10 11 P.M. Pop. 29,000; within 10 m. radius, 119,500.

**Bristol**, a town, partly in Gloucestershire, and partly in Somersetshire, England, at the junction of the Frome and the Avon, 7 m. from the mouth of the latter river on the Bristol Channel, and 118 m. by rail W. of London. With a small coalfield, it has manufactures of iron, silk, floor-cloth, sugar, cocoa and chocolate, tobacco, leather, and soap. The city docks at Bristol itself have a depth of 22 ft. of water; but the docks at the outport at Avonmouth on the Severn, take in the largest ships afloat, the depth of water on the sill being 38 ft. at mean spring tides. Two enormous warehouses for storage of grain, and extensive cold storage for dead meat and provisions. Before the rise of Liverpool, Bristol was the great port of the W. coast, and it still has a very large and important trade with the United States, Canada, the East and West Indies, and other portions of our colonial empire, the Black Sea, and Central and South America. The chief imports are grain, oils, marbles, ores, seeds, fruit, provisions, hides, tallow, sugar, unmanufactured tobacco, timber, petroleum, and dead meat, exports coal, salt, tin-plates, machinery and railway plant, manufactured oils, cottons and piece goods, and chemical products. Distance from Liverpool, 285 m. Pop. 328,842.

**Bristol Channel**, an inlet of the Atlantic Ocean, between the south-western counties of England (Somerset and Devon), and South Wales. It is about 80 m. long, 5 to 45 m. wide, and has a depth of 5 to 40 fathoms. The coast line measures over 200 m., and the whole opening is the largest in England. It is remarkable for the rapid flow of the tides and the great height to which they rise, 35 ft. at Bristol and over 40 at Chepstow.

**Britain** See Great Britain.

**British Borneo** See Borneo.

**British Central Africa**, a British protectorate in Africa, lying to the W. and S. of Lake Nyassa, E. and S.E. of North-Eastern Rhodesia. Plateau drained by streams flowing to Lake Nyassa and in S. by Shire, which carries the

surplus waters of the lake to the Zambesi. Communication by river steamers from Churumo on the Shire to Chunde at the mouth of the Zambesi. Roads are being made. Wheat, barley, and oats can be grown; but meanwhile the great article of production and export is coffee, though rubber has begun to make progress. Other exports—tobacco, oil-seeds, rhinoceros horns, hippopotamus teeth, strophanthus seeds, rice, &c., imports—cottons, machinery, hardware, agricultural implements, and provisions. The chief town, Blantyre, in the centre of the S., has about 6000 inhabitants, of whom 100 are Europeans. Area of protectorate, 42,217 m. Pop about 900,000, of whom 450 were Europeans and 250 East Indians.

British Columbia, the largest province of the Dominion of Canada, extends from the line of 120° W and the summit line of the Rocky Mountains to the Pacific Ocean, and from 49° N. (the United States boundary) to 60° N. The northern half of the W. side is cut off from the sea by a narrow coast strip which is a continuation southward of Alaska, and as to the exact boundary line of which there is at present dispute between the Dominion and the United States. The province, which includes Vancouver and the Queen Charlotte Islands, extends for 764 m. from N. to S., with a breadth of about 400 m., and has an area of 383,300 m. The country is very mountainous, the Rockies reaching in Mount Brown and Mount Hooker a height of 16,000 ft. To the W. of, and parallel to, the Rocky Mountains are the Selkirk and Gold Ranges, with elevations of 10,000 ft., and the Cascade and Coast Ranges with an average width of 100 m., and height of 6000 to 7000 ft. The drainage is carried off by the upper part of the Columbia, the Fraser, the Thomson, and the Peace Rivers. The Fraser is 740 m. in length, and is navigable by river steamers for 110 m., and by smaller craft some distance farther. There is naturally great variety of climate. Near the coast it is milder than in the S. of England, in the southern interior it is dry and hot, while the rainfall and the cold increase towards the N., where the climate is severe, especially in winter. On the whole it may be said that the western slopes receiving the warm moist winds of the Pacific are moist, while the eastern slopes are dry. The province is heavily wooded, and lumbering is an important industry. The area under timber is estimated at 285,554 m. The trees grow to a gigantic size on the seaward slope of the coast ranges; among the most valuable are the Douglas fir, red and yellow cedar, and white spruce. Columbia has much land suitable for agriculture and pastoral farming, especially on the alluvial plains of the lower Fraser valley, in the south-eastern and northern portions of Vancouver Island, and in

the Okanagan district. On the higher plateaux, with their rich bunch grass, ranching is most profitable. The fruit-growing industry is increasing in importance, and there is a large government experimental farm at Agassiz. Land is offered to settlers on easy terms, but must be actually settled on and worked. The fisheries are exceedingly valuable, the Columbia and Fraser Rivers being frequented by great shoals of salmon. This gives rise to an enormous canning industry. Fur sealing is also of considerable importance, while deep-sea fisheries for cod, halibut, and sturgeon, are being systematically developed. The chief wealth of the province, however, is in its minerals, gold is found almost everywhere, and is worked both by hydraulic surface mining and by stamp mills. The chief gold districts are Cariboo, Kootenay, and Atlin. There are large coalfields with excellent coal in thick seams, especially at Crow's Nest Pass on the mainland, to which a railway has been made, and at Nanaimo and Comox on Vancouver Island. Silver, lead, and copper are mined, and the working of cinnabar, platinum, gypsum, asbestos, and plumbago, has been begun. The total mineral output is meanwhile valued at nearly £3,500,000, of which gold is worth nearly £1,000,000. The southern part of the province is traversed by two sections of the Canadian Pacific Railway, one westward from Calgary (by Kicking Horse Pass) and the other from Lethbridge and Macleod nearer the United States border (by Crow's Nest Pass), and these are united by several cross branch lines (rail, or rail and steamer). Pop 177,500.

British East Africa, a great protectorate in eastern Africa, on both sides of the equator, bounded N.E. by Abyssinia and Somaliland; S.E. by the Indian Ocean, S.W. and S. by German East Africa, and W. by the Congo Free State; while on the N.W. it is co-terminous with the Nile Soudan, from which it is separated by no definite line. From Abyssinia it is separated by the line of 60° N and the Juba R. (about 43° E), its extreme southern limit is about 4½° S, and its extreme western limit 29½° E, at Albert Edward Nyanza. It includes Zanzibar and Pemba. The surface forms part of the great African plateau, sloping on the one hand south-eastward to the coast lowlands, and on the other north-westward to the Nile basin, while the S.W. has elevations rising above the plateau level, and forming a hill district. The drainage of the N and W. is carried off by the Nile and its tributaries, while the S.E. has the Juba, the Tana, the Sabaki, and the streams flowing to them. In the centre of the N. are Lakes Rudolph and Stefanie, and along the south-western border Lakes Albert Nyanza, Albert Edward Nyanza, and Victoria Nyanza, with Lake Choga between the first and last. The

mean annual temperature on the plateau is probably about 70° Fahr, and the rainfall varies from 25 to 50 in. A considerable portion of the country is suitable for Europeans. The Nile is navigable to Albert Nyanza, and the Juba and Tana, for flat-bottomed boats, for several hundred miles from the coast. The S.W. is also traversed by the Uganda railway from Mombasa north-westward for 562 m. to Port Florence on Victoria Nyanza. The mainland portion of British East Africa is divided into the East Africa Protectorate and the Uganda Protectorate. The former includes the eastern portion from the coast for about 400 m. inland, and is governed by a commissioner (who also acts as consul-general), and four sub-commissioners, each of whom rules over a separate province—Jubaland, Tanaland, Seyidiye, and Ukamba. The first is in the N.E., and Tanaland lies to the S. of it, drained by the Tana, navigable for 200 m., and by its annual overflow rendering a strip of land on either side very fertile. The coast is bordered by mangrove swamps, behind which are forests with rubber trees. Between Tanaland and the German frontier is the fertile district of Seyidiye, where the Taru desert, an almost impenetrable belt of vegetation, some 40 m. wide, and depending for its dense growth entirely on rain, would seem to mark an area of fertile soil, which might be cleared and rendered valuable for cultivation. Ukamba lies inland from Seyidiye, and has great grassy plains. The coast strip of the Protectorate has coconut palms, and exports copra; while in Seyidiye there are gum copal, samsim oil, tobacco, bark, and hemp; and the trees of the Taru desert yield gum arabic, though nothing has yet been done to collect this. Rubber trees thrive, and there might be cultivation of cinnamon, cardamoms, cocoa, and vanilla, and probably of sisal fibre and ramie. The highlands of Ukamba seem to be favourable for the growth of European fruits, cereals, and vegetables (especially potato-growing on a large scale); and castor-oil plants, and aloes for fibre, are also valuable. Tea, coffee, cotton, and tobacco, would also probably thrive, and ostrich farms might be established. India-rubber is got, and with skilled attention the industry, of value now, would probably pay well. Imports in demand are Bombay and American grey cloths, Kaniki black and dark-blue cloths, kangas (women's garments), Turkey reds, flannel shirts, woollen blankets, fez caps, umbrellas, brass, copper, and iron wire; beads of different kinds, coloured handkerchiefs, iron tools, and provisions. The only exports of value, meanwhile, are ivory, rubber, hides, and horns. The imports are valued at nearly £500,000, and the exports at £125,000. Area probably 280,000 m. Pop estimated at 2,500,000. The Uganda Protectorate lies between the East

Africa Protectorate and the Congo Independent State, and between German East Africa and the parallel of 5° N., with the Albert Nyanza and the Albert Edward Nyanza lakes on the W. border, Lake Rudolf on the N.E., and half of Victoria Nyanza on the S. The area is about 150,000 m. and the population about 4,000,000, of whom only some 300 are Europeans. The region is of great political value, as it contains the head waters of one branch of the Nile, interference with which might greatly injure the irrigation water of Egypt. The surface is plateau, over 3000 ft., with, in the S and W., mountains rising to a height of 14,000 to 20,000 ft. The N. is covered with forests. The climate is mild, with a temperature ranging from 60° to 84° Fahr, and a rainfall of 47 inches. Iron, china-clay, and copper are found, coffee and cotton grow wild; there are rubber vines and trees (covering 30,000 m.); and fibre plants (rhea, sansevieria, bark cloth tree, &c.) abound, as well as gum-producing plants, strophanthus, and ebony and other trees. Cattle, sheep, and goats thrive, and there seems to be opportunity for developing industries in connection with the growing of coffee, cotton, cacao, fibre plants, rubber, sugarcane, vanilla, tea, and wheat and other grains. The spinning and weaving of cotton might also be possible. The chief exports meanwhile are ivory, timber, cattle, gum, and hides.

**British Empire.** See Great Britain

**British Guiana.** See Guiana.

**British Honduras.** See Belize

**British Somaliland.** See Somaliland.

**Brito**, a port on the Pacific coast of Nicaragua, about 30 m. N.W. of the boundary with Costa Rica. It will probably be the western terminus of the Nicaragua Canal.

**Brody**, a town in Galicia, Austria, centre of trade with Russia. Industries connected with beer, leather, flax, &c.; trade is mainly in the hands of Jews, whence the town is known as the "German Jerusalem" Pop. 17,500

**Broken Hill**, a town in New South Wales, Australia, about 920 m. W. of Sydney. The district around is the great silver centre of the continent, the Proprietary Mine being the most prolific in the world. The lead produced in the district amounts to some 28 per cent. of the world's supply. Copper, zinc, tin, gold, and asbestos are also found, and the total mineral exports yearly are about £2,500,000 Pop. 27,500.

**Bromberg**, a town in the province of Posen, Prussia, at point of junction of R. Brake with canal 17 m. long, connecting Brake with R. Netze; iron foundries and machine shops; corn, paper, and cloth mills, breweries and distilleries. Pop. 52,500

**Bromo**, an island in Lake Wener, Sweden, with manufactures of plate-glass.

**Bromsgrove**, town in Worcestershire, Eng-

land, 13 m. S.W. of Birmingham, nail-making, wagon-making, and button factories. Pop. 8416

**Bromwich.** See West Bromwich.

**Brooklyn**, a part of New York City, situated on W. end of Long Island. The harbour, practically part of that of New York, has enormous storehouses for grain, &c. Shipbuilding is carried on, refining of sugar and petroleum, and there are manufactures of boilers, buttons, carpets, chemicals, felt goods, glass, lace, metal goods, oil-cloth, prints, paper, tobacco. Pop. 1,167,000

**Broseley**, town on the Severn, in Shropshire, 15 m. S.E. of Shrewsbury; coal and iron, and coarse earthenware and tobacco pipes, especially "churchwardens."

**Broussa**, or **Brusa**, a town in Asia Minor, 57 m. S.E. of Constantinople, and 13 m. S. of Sea of Marmora, at the foot of Mount Olympus; famous for silks and silk-worms, but production is falling off. British vice-consul. Pop. 76,500

**Broxburn**, town in Lanlithgowshire, Scotland, 12 m. by rail W. of Edinburgh, on the Edinburgh and Glasgow Canal, shale mining, and paraffin works. Pop. 7000

**Bruges**, a town of Belgium, 13 m. by rail E. of Ostend, and 62 m. W.N.W. of Brussels. It is connected with the sea by the canal from Ghent to Ostend and Sluys; manufactures lace, linen, cotton, woollens, leather, soap, and tobacco, has sugar and salt refineries, and distilleries. Regular communication from Goole. British vice-consul. Pop. 53,000

**Brunoi** See Borneo

**Brunn**, capital of Moravia, Austria-Hungary, 93 m. by rail W. of Vienna, centre of Austrian woollen manufactures, makes also linen, chemicals, machinery, &c. Pop. 109,500

**Brunswick**, a duchy of N.W. Germany, with Hartz Mountains on S. Rivers Ocker and Weser navigable, and the former connected with the Bode by canal. Cattle-rearing, sheep, forests of beech, pine, fir, and oak, and minerals in Hartz—coal, iron, &c. Brunswick, the chief town, is on the Ocker, 143 m. S.W. of Berlin, and has manufactures of linens and woollens, jute, sewing-machines, &c. Area of duchy, 1421 m. Pop. 464,500. Pop. of town, 128,500

**Brussels**, capital of Belgium, 193 m. by rail N.E. of Paris, 242 m. from London, and connected with Antwerp by canal and the rivers Rupel and Scheldt, so as to be accessible for boats of not more than 10 ft draught. Brussels carpets are made in the north-western suburb of Laeken, lace particularly famous, manufactures embroidery, ribbons, linen, hats, damask, paper, jewellery, porcelain, soap, and carriages. Letters, 9 hours; parcels, 14. British vice-consul. Pop. (with suburbs) 562,000

**Brynmawr**, town in Brecknockshire, Wales,

on coalfield, with large iron works. Pop. 6331

**Bucharest**, capital of Roumania, on the Danube, 170 m. by rail N.W. of Varna, 716 m. S.E. of Vienna. It is the centre of the trade between Austria-Hungary and the Balkan Peninsula. British vice-consul. Pop. 242,000.

**Buckingham**, or **Bucks**, an inland county in S. of England, thickly wooded and mainly agricultural; manufactures lace, paper, and straw plait. Area of county, 172,604 acres. Pop. of county, 195,531. Pop. of town, 3161.

**Buda-Pesth**, capital of Hungary, and second city of Austria-Hungary, on the Danube, which separates the towns Buda and Pesth, of which it is made up, 172 m. by rail S.S.E. of Vienna, and 1165 from London. The city is the centre of an extensive commerce with the surrounding districts, and its principal industries are those concerned with the working up and transporting of their agricultural produce. The Hungarian flour of its mills is famous. It has also printing establishments, and manufactures of machinery, tobacco, sugar, leather, agricultural implements, beer, spirits, chemicals, glass, &c. In the neighbourhood are springs of natural mineral waters, some of which, as Hunyadi Janos, are exported. Letters, 2 days; parcels, 5½ days. British consul-general. Pop. 732,500.

**Budweis**, a city in Bohemia, Austria-Hungary, on the Moldau (which is here navigable), 133 m. by rail N. of Vienna, and 77 S. of Prague, manufactures lead pencils and stone-ware, and has a transit trade. Pop. 39,500

**Buenos Ayres**, a province and a town of the Argentine Republic, on the Atlantic coast S. of La Plata. The province is fertile in the S., and rears great herds of sheep and cattle, besides producing maize, wheat, pulse, flax, and vinea. The town, the capital of the Argentine Republic, is on the right bank of the La Plata, 150 m. from the sea. Inshore the water is shallow, but in the entrance canal there is usually about 20 ft, though this is reduced by a N. wind to about 16 or 17, the N. channel has been dredged to 23 ft. Buenos Ayres is the terminus of six railways, and so has a large inland trade, being almost the only outlet for the products of the republic. About half of its imports are British, and one-fifth of its exports go to Great Britain. Of a total overseas trade of 4,500,000 tons entered and cleared, more than half is carried in British bottoms. Manufactures of cloth, carpets, furniture, cigars, boots, and shoes. Regular communication from London, Liverpool, Southampton, and Glasgow. Distance from London, 6280 m., Liverpool, 6205; Rosario by Paraná, 210, Asuncion, 1240. Letters, 22 days; parcels, 28 days. Time for noon at London, 8 6 A.M. British consul. Area of province, 177,777 m. Pop. 1,140,000, pop. of town, 836,500

**Buffalo**, a town in the state of New York;

United States, extending for 5 m. along the eastern end of Lake Erie and the R. Niagara. It is 423 m by rail from New York, and 539 from Chicago. The harbour admits vessels of 17 ft draught. The place is a great centre of the grain, live stock, coal, and timber trades. About 80,000,000 to 90,000,000 bushels of grain are handled every year. There are also large iron and steel works, foundries and machine shops, railway-carriage works, oil refineries, besides breweries, tanneries, and shipyards. The city shares in the power for electric purposes furnished by the Niagara Utilisation Company. Pop. 352,500

**Bukowina**, a province of Austria-Hungary, on the E side of the Carpathians, in the angle between Galicia and Transylvania. It is thickly wooded, has a considerable amount of minerals, and rears great numbers of cattle and horses. Area, 4035 m. Pop. 730,500

**Bulawayo**, or **Buluwayo**, a town of Rhodesia, on the western base of the Matoppos Hills, 1360 m by rail N.E. of Cape Town, and 1199 m from Algoa Bay (Port Elizabeth). Great gold-fields in neighbourhood. Pop. about 4000

**Bulgaria**, an autonomous Turkish principality in the Balkan Peninsula, bounded N. by the Danube, E. by the Black Sea, and S. by the Balkan Mountains. It now also includes Eastern Roumelia. It is almost entirely an agricultural country, about five-sevenths of the population being engaged on the land. Wheat is the principal product, and is largely exported, but wine, tobacco, and silk are also raised. Among the minerals iron takes a leading place, but gold, silver, lead, manganese, and copper are also found. The chief manufactures are attar of roses, woollen and cotton goods, and cigarettes, while there are also breweries, distilleries, filigree work, &c. The principal imports are textiles, metal goods, machinery, petroleum and other oils, leather, and general goods. Of a total import of nearly £2,000,000 about one-sixth comes from Britain and British possessions, and recent decline is due to want of energy on the part of British merchants, especially in the matter of commercial travellers. The bulk of the articles taken from the United Kingdom are cottons, metals, metal goods, and colonial goods. The exports to Britain and British possessions (about one-ninth of over £2,000,000) consist mostly of cereals (maize, wheat, and barley) and attar of roses. Other productions and exports are rice, silk, wine, tobacco, eggs, and skins. There is a British consul-general at Sofia. Area, 37,323 m. Pop. 3,733,500

**Bulhar**, a trading station in Somaliland, on the Gulf of Aden, near Berbera, and with similar imports and exports, but only to about one-third of the value.

**Bunder Abbas**, a town in Persia, on the Persian Gulf, 10 m. N.W. of Ormuz Island.

Large trade with India. Imports yarn and piece goods, tea, sugar, dyes, spices, rice, hardware and cutlery, copper, tin, and iron, exports cotton, carpets, dates, almonds, raisins, currants and other fruits, drugs, gum, dyes, ghee, spices, opium, wool, and silk and woollen goods. Anchorage up to 18 ft. a mile off shore; for greater draught 2 m. Of an export of over £150,000, four-fifths go to British India, and a very small proportion direct to the United Kingdom. Of an import of nearly £450,000, over three-fourths come from India and the United Kingdom. Of a total tonnage of about 300,000, some 280,000 is British. British vice-consul. Pop. fluctuates from 6000 to 8000

**Burgundy Canal**, a canal in France, from the Seine basin, at junction of Yonne and Armançon, by Dijon to the Saône at St Jean-de-Losne, 152 m., many locks, summit level, 1230 ft.

**Burlington**, a town in Iowa, United States, on the right bank of the Mississippi, 207 m by rail W.S.W. of Chicago; coalfield, and has manufactures of machinery, agricultural implements, carriages, &c. Pop. 23,500

**Burlington**, the most populous town in Vermont, United States, on the eastern shore of Lake Champlain, has a good harbour, and access by canals and by Richelieu R. to Hudson and St. Lawrence, manufactures furniture, and has cotton and flour mills, and machine shops, great lumber centre. Pop. 19,000

**Burma**, a large province in the S.E. of the Indian Empire, 1100 m in extreme length, and 700 m in breadth. It consists mainly of the river basins of the Irrawaddy and the Salween, with the coast strips known as Arakan and Tenasserim. On the N. the province is bounded by Tibet, on the E. by China and Siam, and on the W. by Assam and Bengal. The greater part of the surface is mountainous, with vast forests of teak and bamboo, both of which are largely exported. The river-plains or deltas at the mouths of the rivers are the only flat parts, and in the wet season, lasting on an average six months in the middle of the year, are flooded for from 10 to 16 m beyond the river banks. Rice can thus be readily cultivated, and is the chief product, constituting from 60 to 70 per cent. of the total rice output of British India. Up country the rainfall is enormous, reaching 200 in., and on the whole the climate is more trying to Europeans than even that of India. The rivers are the chief means of communication, but the smaller ones are either too strong in the current, or fall too low during the dry season (February to April) to be navigable. The Irrawaddy is, however, available the whole year round as far as Bhamo, 900 m from the sea, and 50 from the border of China. There are railways from Rangoon (the capital of Lower Burma) along the lower Irrawaddy

to Prome, to Mandalay (the capital of Upper Burma), and thence to Myitkyina, towards the Tibetan frontier, and from Bassein, in the S W, to Kjankin, on the W bank of the Irawadi N of Prome. Coal is worked in both districts of the province, but that of Lower Burma is inferior in quality, and there is but a small supply. Alluvial gold is found, and silver in the lead workings, tin, however, the characteristic metal of the Malay Peninsula, exists in great quantity, as also do iron and copper. Jade and amber are found, and in the upper district beyond Mandalay are the richest ruby mines in the world, with stones of the finest quality. Sapphires and other gems also exist. All these articles are exported, mainly through Rangoon, along with teak (from mountains of Upper Burma—very important), cotton, hides, wax, ivory, gums, rubber, and oil. The province imports the usual European manufactured goods. The Burmese display great skill in silver repoussé work, in wood-carving, silk-weaving in colours, and lacquer ware. Area, 236,738 m. Pop 10,490,000.

**Burnley**, a town in Lancashire, England, on the R. Burn, 27 m by rail N of Manchester, and on the Leeds and Laverpool Canal, has cotton weaving, spinning, and printing, and manufactures the necessary machinery, such as looms, &c. Coal is mined in the neighbourhood. Pop 97,044.

**Burntisland**, a seaport on the Firth of Forth, Fifeshire, Scotland; exports coal in great quantities, good harbour, with wet docks, 22½ ft. and 28½ ft. at high water. Pop. 4846.

**Burra-Burra**. See South Australia.

**Burrard Inlet**, at the S end of British Columbia, and N of the Fraser R. near Vancouver, the terminus of the Canadian Pacific railway. It is 9 m long, and one of the finest natural harbours on the Pacific coast.

**Burslem**, a town in "the Potteries," Staffordshire, England, pottery, porcelain, encaustic tiles, and glass. Pop 38,766.

**Burton-on-Trent**, a town in Staffordshire, England, on the Trent and Trent and Mersey Canal, 25 m by rail from Stafford. World-famed for its ale, owing to peculiarities of water (sulphate of lime, &c). There are about thirty breweries, the chief of which are those of Bass and Allsopp. As might be expected, the town has also large copper works and iron foundries. Pop 50,386.

**Bury**, a town in Lancashire, England, on Bolton Canal, 10 m by rail N of Manchester, an important seat of cotton industry. There are besides, bleaching, dyeing, and print works, and paper manufactures. Coal abundant, and quarries of freestone. Pop 58,028.

**Bushire**, a port of Persia, on a sandy promontory on the E shore of the Persian Gulf. The outer roads give an anchorage of 24 ft. 6 m. from shore; the inner roads, about 2½ m. off, allow of vessels up to 13 ft. The town is the land terminus of the Indo-European telegraph line. The chief imports are cotton piece goods, twist, and yarn; sugar, grain and pulse, tea, woollen goods, indigo, drugs and medicines, silk goods, silver ware and jewellery, iron, tin, and copper, candles, matches, paraffin, china ware, ghee, and tobacco (manufactured), the chief exports, opium, pearl shell, gum, carpets, almonds and almond kernels, and tobacco. Of a total export of about £600,000, more than one-third goes to the United Kingdom and India, and nearly one-half to China, of a total import of over £1,500,000, over one-half comes from the United Kingdom, and one-fifth from India. Of a tonnage, entered and cleared, of about 300,000, about five-sixths were British. Distance from London, 6460 m., from Liverpool, 6385, from Glasgow, 6495. British consul-general. Pop 27,000.

**Bussorah**, or **Basra**, a town on the right bank of the Euphrates, 6 m from its mouth, in Asia Minor, Turkey. River navigable up to town for ships drawing 18 ft., depth of water on bar at high water of spring tides, 22 ft., at neaps, only 15 ft. The town is on the projected Mediterranean and Persian Gulf railways. There is a considerable transit trade to Baghdad, chief imports, cotton, silk, and wool, cloths, yarn and twist, sugar, coffee, wood for date boxes, &c., spices, stationery, iron and steel bars, hoops, &c., gunnies, indigo, coal and charcoal, copper, petroleum, matches, drugs, tea, and tobacco, chief exports, dates, wool, barley, opium, liquorice-root, gall nuts, seeds, hides and skins, carpets, gum, horses, wheat, rice, and ghee. The imports and exports are each valued at about £1,200,000, and nine-tenths of the trade (total, 200,000 tons) is carried in British bottoms. British consul. Pop probably about 40,000.

**Butte**, a town in Montana, United States, silver mines and quartz mills. Pop 30,500.

## C

**Cabot Strait**, between Newfoundland and Cape Breton Island, leading into the Gulf of St. Lawrence.

**Cadiz**, a famous Spanish port, situated on a narrow tongue of land projecting into the Atlantic, 450 m. by rail S W of Madrid. It

has four graving docks, 193 ft. to 557 ft. in length, depth of water at the entrance to harbour, 6 to 12 fathoms. Imports mostly cotton goods, coal, iron tubes and steel, cement, alcohol, staves, timber, and provisions. Chemical manures, which used to come entirely from the

United Kingdom, are now almost entirely German, owing to German firms sending travellers to keep in touch with the requirements of customers. Chief exports, wine, salt (mostly sent to the River Plate and Newfoundland), cut corks, canary seed (mostly to the United Kingdom), tunny-fish (mostly to Italy), and olives and olive oil (mostly to Cuba and Porto Rico). Of a total trade of over a million and a half tons, less than one-tenth is British. There are shipbuilding yards (steel and machinery for which are imported from Britain), ammonia and chemical manure works, a sugar factory, and manufactures of glass, woollens, hats, &c. Regular communication from London, Liverpool, Bristol, Glasgow. Distance from Liverpool, 1200 m, the Tyne, 1516. Letters, 3 days. British consul. There is also a province of Cadiz, with an area of 2809 m. Pop of province, 434,500; pop of town, 70,500.

Caen, the chief town in the department of Calvados, France, on the Orne, 122 m W.N.W. of Paris, and 9 m from the sea, with which it is connected at Ouistreham by a canal having a depth of 17 ft. The chief manufacture is lace, but the place exports also iron ore, sugar, fruit, vegetables, and butter (trade in the last slowly vanishing); imports coal, timber, pitch, coffee, and general goods. Of a total trade of some 400,000 tons, about one-third is British. Regular communication from Newhaven. British vice-consul. Pop 45,000.

Gaerphilly, a town in Glamorganshire, England, about 7½ m N of Cardiff, iron works and collieries; manufactures of linsey-woolsey and shirtings. Pop 15,835.

Cagliari, the capital of Sardinia, 307 m from Leghorn, and 268 from Naples, on a bay on the S coast, with a harbour from 6 to 21 ft deep, exports zinc, lead ore, cereals, oil, and wine, imports coal, cotton, soap, salt, &c. Distance from Leghorn, 300 m, Tunis, 166. British consul. Pop 54,000.

Calthness, a county in the extreme N.E. of Scotland, flat and bare except in W. and S; important fisheries off the coast—herring, cod, ling, salmon; produces excellent blue flagstones. Area, 438,878 acres. Pop 33,870.

Calabar, a district on the coast of Guinea, Africa, between the delta of the Niger and the Cameroon territory, palm-oil, india-rubber, ivory, ebony, Shea butter, and Ben seed. The

Dover thrice a day, and also regular communication with London. There is a manufacture and export of silk, cotton, and linen, lace, and of tulle, other industries—sugar-making, biscuit-making, brewing, bricks, furniture, silk, soap, tiles, and pottery. The chief exports to the United Kingdom are champagne and other wines, sugar, mineral waters, fruit, and glass ware. The chief imports from the United Kingdom are cotton and woollen tissues and yarn, raw wool, coal, iron and iron ware, jute, machinery, refined petroleum, and beer; and, from other countries, timber (Sweden, Norway, and Russia), wood ware (Norway and Sweden), iron ore (Spain and Italy), and raw petroleum (United States). Of a total tonnage of nearly 3,000,000 tons, over three-quarters are British. Regular communication also with Goole and Leith. British consul. Pop 60,000.

Calanas, a small town of Andalusia, S Spain, with an important copper mine.

Calcutta, the capital of British India, and the chief town of Bengal, on the left bank of the Hooghly, one of the mouths of the Ganges, 80 m from the sea. Vessels up to 27 ft can ascend river. Graving docks from 225 to 710 ft. long. Between December and May vessels over 24 ft. in draught have to lighten at Diamond Harbour, about half-way up. Important railway and canal centre. Manufactures of jute, cotton, iron, &c. The port has 45 per cent of whole trade of India. Exports cotton, rice, spices, cutch, hides, oils, seeds, dye-stuffs, hemp, tea, jute, opium, india-rubber, imports coal, iron, textiles, cotton yarns, salt, hardware, machinery, spirits, petroleum, tobacco, provisions, &c. Regular communication from London, Liverpool, Cardiff, Glasgow. Distance from London, 7950 m, Liverpool, 7875; Glasgow, 7985; Madras, 770; Colombo, 1240; Rangoon, 787; Penang, 1350. Letters, 17 days, parcels, via Gibraltar, 27 days; or via Brindisi or Marseilles, 20 days. Time for noon at London, 5.45 p.m. Pop 1,027,000.

Caledonian Canal connects through a chain of natural lochs the Firth of Lorne on the W. coast of Scotland with the Moray Firth on the E., length, 60½ m, of which 38½ are lochs. The canal proper is 120 ft. wide on the surface, 50 ft. at bottom, and 17 ft. deep; summit level, 105 ft.

Calicut, a seaport on the Malabar coast, Madras, India, 366 m by rail S.E. of Br-

There is extensive gold production, and quick-silver, lead, silver, copper, iron, antimony, and chromium are found in considerable quantities, as well as rock salt, borax, asphalt, soda, sulphur, and china clay. Petroleum is abundant, but there is little coal. The agricultural wealth of the state—in wheat, vines, &c.—is also remarkable, though in places irrigation has to be used. Along the coast are important fisheries. Bee-keeping and silk-raising are also among the industries, with shipbuilding, sugar-refining (beet), the distillation of brandy, and the packing of meat, &c. All these articles form the export of the state, to which may be added fresh, preserved, and dried, fruits—grapes, oranges, peaches, prunes, almonds, raisins. Four railway lines connect California with the eastern states. Area, 155,980 m. Pop. 1,485,000.

Callao, the chief seaport of Peru, 7 m. by rail S W of Lima. The harbour has a depth at entrance of 21 ft. at low water, and 25 ft. at high water, with a depth at berths varying from 13 to 27 ft. Exports guano, chemicals, cochineal, coffee, rice, cocaine, wool, salt, sugar, hides, tobacco, &c., imports coal, machinery, and railway material from England, flour and wheat from California and Chile, rice from Rangoon, coal and wheat from New South Wales and South Australia. Regular communication from London and Liverpool. Distance from London, 9970 m., Liverpool, 9895, Glasgow, 1005 m. Letters, *via* Panama, 29 days. British consul-general. Pop. 48,500.

Calmar, or Kalmar, a seaport and province in S Sweden. The town, which is fortified, is on the island of Quarnholm, and has a harbour with a depth of about 16 ft., closed by ice in February, imports coal, salt, manure, machinery, and provisions, exports timber. Of a total trade of nearly 260,000 tons, a little over one-seventh is British. British vice-consul. Area of province, 4443 m. Pop. 228,000; pop. of town, 13,000.

Caltanissetta, a town, capital of province of same name, Sicily, 83 m. S E of Palermo, with mineral springs and sulphur works. Pop. 45,000.

Calumet, a peninsula on Lake Superior, in the state of Michigan, with one of the richest copper mines in the world.

Cambodia. See French Indo-China.

Camborne, a town in Cornwall, 11 m. S W of Truro, copper, tin, and lead. Pop. 14,726.

Cambray, or Cambray, Nord, France, on the Scheldt, 32 m. S S E of Lille, with manufactures of cambric, lace, leather, linen thread, soap, &c. Pop. 27,000.

Camden, a river port in New Jersey, United States, on the Delaware, opposite Philadelphia. Great railway centre, with docks and shipyards, and manufactures of machinery, cotton and woollen goods, iron ware, paint, and oil-cloth. Pop. 76,000.

Cameroon, Cameroons, or Kamerun, a German colony on the W. coast of Africa, stretching inland from the Bight of Biafra, between Nigeria and French Congo and Soudan. The coast is an unhealthy mangrove swamp, but the interior is better, and produces rubber, ivory, palm-oil, and salt, while the growing of cocoa and tobacco is making progress. The imports are textiles, iron and iron wares, spirits, and provisions. The town of Cameroon can be reached by only small vessels. Regular communication from Liverpool. Letters, 23 days. British consul. Estimated area, 190,000 m. Pop. 3,500,000.

Campbeltown, a town on the E coast of Kintyre, Argyllshire, Scotland, 75 m. from Glasgow. Fishing station and distilling centre, imports barley and exports whisky. Pop. 8286.

Campeachy, or Campeche, a seaport of W Yucatan, Mexico, manufactures cigars and palm-leaf hats, and exports logwood, salt, wax, skins, and sugar, imports manufactured goods. British vice-consul. Pop. 16,000.

Canada, Dominion of.—*Situation and Size.*—Canada is a great colony of the British Empire, covering the whole of the northern half of North America except Alaska, and with its mainland portion lying roughly between the extremes of 41° N (Lake Erie) and 72° N (Boothia Peninsula), and between 57° and 141° W, while to the N and N E there is a great fringe of islands, stretching away towards the pole. Canada is bounded N by the Arctic Ocean, E by the Atlantic and Newfoundland (including the coast of Labrador), S by the United States, and W. by Alaska (United States) and the Pacific. The southern boundary, from the Lake of the Woods, about 95° W, follows the line of 49° N westward to Puget Sound, and passes, thereafter, by the San Juan de Fuca Strait to the Pacific. The E coast is broken up by the great inlets of Hudson Strait and Bay, with the lesser James Bay, the Gulf of St. Lawrence, and the Bay of Fundy, which are, however, not of so much importance for harbours as they might be; the first three owing to ice in winter, and the last from the height of the tides and the strength of the tidal currents. The W. coast is much broken, and fringed with islands which give shelter, but meanwhile the population of this part of the country is sparse, and the great possibilities of the district await development. The N coast is of course useless from a commercial point of view, on account of the latitude. The S E is broken up by the chain of great lakes—the largest fresh-water area of the world. Along the E coast, by Labrador, Cape Breton Island, and Nova Scotia, there are low hills, while the S E of the St. Lawrence basin is bounded by a northern extension of the Appalachians, with a height of about 4000 ft. Along the N W of the basin of the St. Lawrence, of

the Great Lakes, and of all their northern feeders, stretch the Laurentian Plateau and the Laurentian Range, with heights of from 1000 to 3000 ft. From N.N.W to S.S.E., towards the Pacific coast, run the Rocky Mountains and the parallel Selkirk and Cascade ranges, with great intervening valleys, and with an average height of some 8000 ft., the greatest altitude being attained in Mount Hooker (15,700), Mount Murchison (15,789), and Mount Brown (16,000). Between the Laurentian Range, N of Lake Superior, and the foothills of the Rocky Mountains, is an enormous stretch of fertile prairie land, of great importance for wheat-growing and stock-rearing, while the districts both to the E and W of this are in many parts densely wooded. The N is partly plateau, partly plain, sloping to the N, and valuable only for minerals or fur-bearing animals. The great northern and north-eastern stretch is drained by the Upper Yukon, the Mackenzie, Coppermine, and Great Fish or Back Rivers, flowing to the Arctic Ocean, and by the Churchill, Nelson, and Albany, which enter Hudson Bay, the E, the S, and the centre by the St. Lawrence, its tributaries (Ottawa, &c.), and by the Red R., the Assiniboine, and the Saskatchewan, and the S.W. by the Fraser and the upper waters of the Columbia. Over such a wide tract of country, and with such varying altitude, the climate has of course considerable range, but it may be said generally to be one of extremes, modified by the presence of the enormous inland water areas of Hudson Bay, the Gulf of St. Lawrence, and the Great Lakes, and, as to winter cold, by the dryness and stillness of the air. There is a long winter, from about the second week of November to the beginning of April; but the spring, summer, and autumn months are warm, bright, and dry, so that weather conditions for agricultural produce are most favourable, the chief drawback being spring frost. The range of temperature in the centre is from about 88° to 44° Fahr., and the rainfall is sufficient in all districts. The distance between the extreme N and S points already mentioned is about 2100 m; between the extreme E and W. points about 3600, and the area about 3,500,000 m.

*Government, &c.*—The Dominion was formed by the confederation between 1867 and 1873 of all the British North American colonial possessions, with the exception of Newfoundland, and the coast strip of Labrador between Hudson Strait and the Gulf of St. Lawrence forming part of that colony. The executive consists of a Governor-General, representing the British Crown, and a privy council, while the Dominion Legislature consists of a Senate and a House of Commons, the former with 81 members, and the latter with 213. Each province has a lieutenant-governor nominated by the Governor-General, and a legislature (in some cases of two

houses, in some of one house) which manages local provincial affairs. Pop 5,370,000.

*Communications.*—Canada has been fully alive to the development of its water-ways, and, by means of six great Government systems of 262 m., renders available nearly 3000 m. of inland navigation. By means of the St. Mary's, Welland, Galops, Rapids Flat, Farrrens Point, Cornwall, Soulages, and Lachine canals, which have among them a length of only 74 m., it is possible for vessels drawing less than 14 ft. to pass from the head of Lake Superior by the St. Lawrence to the open ocean, and the highest, St. Mary's, between Lakes Huron and Superior, has a depth of 20 ft., while the St. Lawrence channel itself has been deepened to over 27 ft., so that vessels of 6000 tons can reach Montreal, 700 m from the sea. Proposals are also being made to try to utilise the Hudson Bay route for traffic from the first week of July to the first week of October, as this would cheapen and quicken the wheat transport from Manitoba, &c., to the United Kingdom. The Government has also been thoroughly alive to the value of railway communication in general (18,000 m in all) and of the trans-continental communication in particular, and it has thus rendered important services to the construction of the great Canadian Pacific Railway, which runs near the southern boundary from Montreal westward across the Rocky Mountains to Vancouver, a distance of 2906 m; time, 5½ days. There are numerous connecting (Quebec to Montreal, 172 m., Halifax to Montreal, 756 m), and branch, lines, opening up the country on both sides. The Rocky Mountains are crossed by the main line at Stephen (5296 ft., 2387 m from Montreal), near the Wapta or Kicking Horse R., while a branch farther S crosses at Crow's Nest Pass (4427 ft., 2288 m from Montreal), and from Vancouver lines of steamers communicate with Yokohama, in Japan (4300 m, 8½ days), and with Australia (Sydney, 6960 m), and New Zealand (Auckland, 6280 m). See also Pacific Railways.

*Resources and Trade, &c.*—Canada has many sources of wealth, varying widely in the different provinces, and to these reference may be made for fuller details. Here it may be noted that the central district is one of the great wheat areas of the world, while cattle-rearing, fruit-growing, and the manufacture of dairy produce are all industries of first importance. The introduction of cold storage, and cold storage transit, will add still more to their value. The timber (annual product of over £20,000,000) is highly important for the export of lumber, and also of wooden manufactured articles and wood pulp for paper. There are extensive fisheries (annual value over £4,500,000) of lobsters, salmon, herring, cod, and mackerel, and the mineral deposits are enormous and of very great value (over

£12,000,000)—gold, coal, copper, nickel, silver, petroleum, asbestos, lead, and iron. Of a total export of say £40,000,000, Great Britain and British possessions receive well over the half, the United States nearly one-fourth, and Germany one-hundredth, while of imports for home consumption of, say, £36,000,000, Great Britain and British possessions send over one-fifth, the United States over one-half, and Germany nearly one twenty-fifth. The chief imports from the United Kingdom are woollens, cottons, iron, steel, and other metals, and the manufactures thereof, including machinery, telegraph wire and apparatus, cutlery and hardware, silk and manufactures thereof, apparel and haberdashery, alkali and chemical products, hats, glass, cement, coal and coal products, raw hides, oil seed, painters' colours, paper, and salt. The chief exports of domestic produce to the United Kingdom are cheese, wood and manufactures thereof, bacon and hams, wheat and wheat flour, cattle, fish, apples (green or ripe), peas, leather, skins and furs, sheep, butter, eggs, lard, beef, hay, paper and wood pulp. A considerable quantity of maize from the northern United States is also sent through Canada, and there is a transit import of foreign and colonial produce from the United Kingdom of about £1,600,000. Letter postage from the United Kingdom, 1d per half-oz., post-cards, 1d, parcels, not over 1 lb, 8d, and for each additional pound, or part of a pound, up to 11 lbs, 6d, money orders to and from, telegrams mostly 1s a word, to Manitoba and Vancouver Island, 1s 6d, to places in the North-West Territories from 3s 2d to 3s 6d, according to district, mails made up in London twice a week or oftener.

*Money, &c.*—The unit of account is the dollar, of about 4s (legal exchange, 4 86 dollars = a sovereign, and 1 2 dollars = 5s), which is 100 cents. There is no gold coinage, but British and United States gold coins are legal tender, and the Government issues notes for 4, 2, 1 and  $\frac{1}{2}$  dollars, while banks may issue notes down to 5 dollars. The weights and measures are as in Britain, except the hundredweight, which is 100 lbs, and the ton, which is 2000 lbs, both as in the United States.

*Canary Islands*, a group of volcanic islands belonging to Spain, off the N.W. coast of Africa, 62 m from the mainland, lying between  $27\frac{1}{2}^{\circ}$  and  $29\frac{1}{2}^{\circ}$  N, and between  $13\frac{1}{2}^{\circ}$  and  $18^{\circ}$  W. Tenerife is 1420 m S by W of the Lizard, 700 m S.S.W. of Cadiz, and 4450 m N.W. of Capé Town. There are seven large islands, La Palma (29 by  $17\frac{1}{2}$  m), Hierro ( $18\frac{1}{2}$  by 13), Gomera (15 by 13), Tenerife ( $52\frac{1}{2}$  by  $31\frac{1}{2}$ ), Grand Canary ( $34\frac{1}{2}$  by  $29\frac{1}{2}$ ), Fuerteventura ( $61\frac{1}{2}$  by  $18\frac{1}{2}$ ), and Lanzarote ( $36\frac{1}{2}$  by  $13\frac{1}{2}$ ). The total area is about 2808 m<sup>2</sup>. The distance is 7 days' sail from Liverpool, 6 from London, and 3 from Cadiz or Gibraltar. The climate is

delightful, the lowest temperature being about  $48^{\circ}$  and the highest  $95^{\circ}$ , while the rainfall is not excessive. The chief imports from the United Kingdom are cotton and woollen cloths, coal, flour, guano, machinery, iron and steel wares, rice, soap, candles, and timber. The products of importance are onions (sent to West Indies), almonds and oranges (United Kingdom), cochineal (United Kingdom and France), wine (Venezuela, Germany, and Cuba), tomatoes (United Kingdom), bananas (the United Kingdom, France, and Spain), and early potatoes (United Kingdom). The total fruit trade with Great Britain is valued at about £200,000. The annual import of bananas alone is about 1,250,000 bunches. Regular communication from London and Liverpool. Postage as to Spain; telegrams, 9d. a word. The chief town, Las Palmas, in Grand Canary, is a coaling station. The great conical peak of Teneriffe (12,198 ft.) is visible 140 m off. British consul at Teneriffe. Pop 352,000.

*Candia*, capital of Crete; harbour with a depth of 11 to 12 ft., exports olive-oil, soap, raisins, wine, &c., imports calico, flour, rice, barley, sugar, and leather. British vice-consul. Pop 22,500.

*Canea*, the chief commercial town of Crete, at the western end of the N coast. Harbour with 17 ft. of water at the entrance and 12 ft. inside, exports olive-oil, soap, raisins, wine, oranges, cheese, &c.; while the imports are numerous, including cotton yarn and cloth, coal, leather, sugar, rice, coffee, woollens, spirits, jute, tobacco, herring, and codfish. British vice-consul. Pop 21,000.

*Cannes*, a health resort and small port, in the department of Alpes-Maritimes, S.E. France, 18 m by rail S.W. of Nice; harbour has a depth of 16 ft., flower growing for distillation of essences, imports cereals and coal, the latter mostly from the United Kingdom. Of a total trade of over £90,000, Britain has between one-third and one-fourth. Exports practically nil. British vice-consul. Pop 30,500.

*Cannock*, a town in West Staffordshire, England, 8 m by rail N. of Walsall, with important iron industries. Pop 23,992.

*Cannstadt*, a town of Württemberg, on the R. Neckar, 3 m N.E. of Stuttgart, with mineral springs, and iron, cotton, and tobacco, manufactures. Pop 26,500.

*Canterbury*, a province in New Zealand, in the middle of the South Island, lying between the Southern Alps and the sea. The eastern third is formed by the Canterbury Plains (some 4000 m of pasture land) famous for their sheep, wool, grain, and frozen mutton, coal is worked, and gold, iron, and fireclay are also found. Pop (exclusive of Maories) 143,600.

*Canton*, the chief town of the province of Kwang-tung, in S. China, on the Canton R. 70 m. from its mouth, and 90 m N.W. of

**Hong Kong** There are 13 to 17 ft. of water on the bar, and vessels of 1000 tons can ascend as far as the town, but sailing vessels generally anchor about 12 m below, at Whampoa, where steamers also lighten their cargo. The chief imports are opium, cotton yarn and cloths, woollens, paraffin, copper and other metals, flour, coal, ground-nuts, wheat flour, cuttle-fish, aniline dye, jade-stone, Japanese matches, and general goods; the chief exports, silk, sugar, tobacco, matting, glass bangles, buttons, eggs, tea, cassia and camphor, and silver ware. Of a total import of over £2,000,000, nearly two-thirds is British, the principal items being opium, cotton piece goods and yarn, woollens, and refined sugar. Of an export of over £3,250,000, the sum of nearly £2,300,000 was for silk, silk piece goods, and silk waste, and of this but a small portion was destined for any British market. Indeed, probably not more than £500,000 of the exports are for the United Kingdom, but the bulk of the trade is done by British firms and financed with British capital, and the whole foreign trade, import and export, is handled, transhipped, and financed in the British colony of Hong Kong. British consul-general. Pop 800,000.

**Canton**, a town in Ohio, United States, 56 m S of Cleveland, with iron and steel works, iron foundries, wool and paper mills. Pop 31,000.

**Cape Breton**, an island of Nova Scotia, separated from the mainland by the Gut of Canso (20 m long, and 1 to 2 broad). It is practically cut in two by the Bras d'Or Lake and a ship canal. Chief exports fish, timber, coal, and iron ore. 100 m long, 85 wide, and with an area of 3120 m. Pop 49,000.

**Cape Coast Castle**, the chief town in the Gold Coast Colony, 230 m. W. of Lagos. Roadstead where ships load and unload by means of surf-boats. Exports palm-oil, gold-dust, ivory, wood, and kola-nuts; while it imports hardware, manufactured goods, glass-ware, gunpowder, spirits, &c. Regular communication from Liverpool. Distance from London, 3870 m; Liverpool, 3795 m; Glasgow, 3905 m. Letters, 21 days, parcels, 24. Pop 12,000.

**Cape Colony**, or the Colony of the Cape of Good Hope.—*Surface and Size*—Cape Colony is a part of the British Empire forming the extreme S of British South Africa and of the African continent. Inclusive of British Bechuanaland, which was incorporated with it in 1895, it lies between 23° 40' and 34° 51' S and between 16° 24' and 30° 15' E, and is bounded N. by German South-West Africa and the Bechuanaland Protectorate, NE by the Transvaal, the Orange River Colony, Basutoland, and Natal; SE and S. by the Southern Ocean; and W. by the Atlantic Ocean. Running parallel with the coast and at a distance from it of about 150 m. is a series of mountains known as they sweep

round from E to W. by the various names of Drakensberg, Stormberg, Sneeuwberg, Nieuwveld, Roggeveld, and Kamiesberg Mountains, with elevations of 11,000 to 6000 ft. From the coast to these the surface rises by three terraces divided by subsidiary mountain ranges, a large portion of the third terrace being occupied by the Great Karroo—treeless, with bare table-topped hills, and with its 350 m long plateau sloping from 4000 ft on the W. to about 3000 on the E. It is covered with the scrubby Karroo bush, which, like the salt bush of Australia, provides excellent feeding for sheep and goats. Systematic irrigation is being developed, and wherever the necessary amount of water can be got the soil is marvellously fertile. The Southern Karroo or second terrace resembles the Great Karroo, but is less uncompromising in its appearance, and its soil has under irrigation the same wonderful fertility. Both districts are at their best after the spring rains, when they are, for two or three months, covered with verdure. The coast terrace, and the confined hilly country by which it and the second terrace are replaced in the eastern districts of the colony, have grassy plains with woodland. To the N of the great range of mountains first enumerated, the surface slopes northward to the valley of the Orange R. and the plateau of the interior beyond. The eastern part of the colony has a rainfall of from 25 to 28 in, the central portion and the southern coast and Karroo of from 25 to 9 in, and the Great Karroo and the country to the N and N W of it 9 in or less. With such a very small amount of precipitation there is of course no river of any size, with the one exception of the Orange, which has its source among the mountains in the eastern zone of greatest moisture. The western districts have winter, and the eastern summer, rains. The range of mean temperature in the coast districts is 51° to 74° Fahr; in the midland district, at say 2000 ft, from 46° to 72°, and on the inland plateau, at say 4000 ft, 48° to 79°. The greatest length of the colony from N to S. is about 800 m, the greatest width from E to W about 860 m, and the area 277,151 m. Pop estimated at 2,350,000, of whom three-fourths are natives.

*Government, &c*—There is a governor appointed by the Crown, a legislative Council of twenty-three members elected for seven years, and an assembly of ninety-five members elected for five years. There is a long coast line but most of the bays are exposed and shallow, while everywhere there is, owing to the rapid rise of level, difficulty in securing good inland communication. There are over 2500 m of railway, one main trunk line running north-eastward from Cape Town—the start of the trans-continental line from the Cape to Cairo—and now extending to beyond

Bulawayo; and others from Port Elizabeth, Port Alfred, and East London, northward to the Orange River Colony. There are also branches from these, as well as cross-connecting lines, and a short line of about 91 m. in Namaqualand in the N W connects the copper mines of Ookiep with Port Nolloth. There are also some 8000 m. of good roads.

*Resources, Products, &c.*—The most important source of wealth meanwhile for the colony is its diamond mines, the centre being at Kimberley in Griqualand West in the Vaal R. basin, W of Orange River Colony, the annual output being about £1,000,000. The best known mines are Kimberley, De Beers, Bultfontein, Du Toit's Pan, and the Wessellon or Premier, all within a few miles of one another. There are rich copper deposits as already noticed in Namaqualand, and coal is found in the E along the line of railway from East London, to the N of the Stormberg Mountains, manganese and tin near Cape Town, iron and zinc in different places, and lead (Orange R.). Next in importance to the minerals comes the rearing of sheep and goats, the production of wool and mohair being of the annual value of well over £3,000,000. The first comes from all districts, and the second from the centre. There is also a considerable export of skins. Cattle-rearing (demand for oxen for draught purposes and heavy farm work), and horse, mule, and donkey, breeding, are also important, and so is ostrich farming, which is carried on in many parts of the Great Karroo, a bare country being best suited for these birds. There is considerable cultivation of maize (mealies), millet, wheat (south-western and Queenstown districts), barley, &c. Fruits of almost all kinds grow well, and with the development of cold storage and transit, the trade in these ought to have a great future, as they are ripe in Cape Colony at a time when they are unprocureable in the mother country—grapes, peaches, apricots, nectarines, oranges, figs, olives, pine apples, bananas, tomatoes, and all the ordinary hardy fruits and vegetables. Wine is made in considerable quantity at Stellenbosch, the Paarl, Constantia, and elsewhere, but imperfect methods of manufacture and treatment, and faulty storage, have, hitherto, prevented the vintage from taking the place which inherent possibilities of soil and climate (the climate is probably better than that of southern France) would naturally give it. Excellent brandy can also be made, but the ordinary product is very impure. There is a considerable production of raisins. The manufacturing industries—woollens, leather, waggon building, &c.—are unimportant. Of a total import of over 14½ millions sterling the United Kingdom sends nearly 9½, and of an export of some 23 millions sterling the United Kingdom receives nearly 8½. The bulk of the trade is

carried in British bottoms. The principal articles sent to Cape Colony by the mother country are apparel and haberdashery, iron (wrought and unwrought), steel and cast; cottons, woollens, and worsteds; leather (wrought and unwrought); railway carriages, carts, and cycles, boots; dyestuffs, sulphate of copper, and crelote, &c.; furniture, &c.; condensed milk, paper and stationery, soap, candles, tobacco; dynamite, &c.; grain and flour; earthen, and china and glass ware, electric-lighting apparatus, hardware and cutlery, agricultural implements, tools, linens, drugs, printers' colours, &c.; saddlery and harness, and provisions and liquors. The principal articles sent to the United Kingdom are diamonds, wool and mohair, ostrich feathers; copper ore, reptiles, and precipitates; undressed sheep and goat skins, and raw hides. There is also a transit trade through the United Kingdom of foreign and colonial merchandise to the value of on an average about £200,000.

*Money, &c.*—The money, weights, and measures are as in Great Britain, but a few old Dutch measures, &c., are still in use: a baguet is about 12½ gallons, an aum—31 gallons; an anker—7½ gallons; a muid—3 bushels; a morgen—2110 acres; 1000 Cape linear ft. = 1013 standard ft., a bale of greasy wool, 375 lbs., washed, 220 lbs.; and scoured, 175 lbs.

*Cape Haytien.* A wharf on the N. coast of Hayti; loading and unloading by lighters of 12 to 14 tons from anchorage about 1 m. off shore. The exports are coffee, cocoa, lavender, hides, and honey; and the imports are hardware, fish, tobacco, and provisions. Pop. 29,000.

*Cape Palmas,* a station in Liberia, on the W. coast of Africa, an open roadstead with a depth of 6 fathoms, and cargoes are dealt with by surf-boats. The exports are gold, ivory, palm oil, kernels, and ostrich feathers, while hardware, manufactured goods, beads, and spirits are imported. Regular communication from Liverpool. Letters, 22 days.

*Cape Town,* the capital of Cape Colony, on the shore of Table Bay. Great breakwater protects outer harbour, inner basin has depth varying from 18 ft. upwards, graving dock 529 ft. long with 21½ ft. on sill. Exports are largely the staple products of the colony; wool, diamonds, ostrich feathers, gold, wine, ivory, dried-fish, hides, skins, horns, &c., while the imports include woollens, cotton goods, hardware, machinery, building materials, and general goods. Southern terminus of great central railway system which has now reached northern Rhodesia and is to be extended right across the continent to the Mediterranean in Egypt. Regular communication from London, Southampton, Plymouth, and Liverpool. Distances from London, 6060 m., Liverpool, 5990; Glasgow, 6210, and St. Helena, 1620. Letters,

19 days; parcels, 20. Pop. 51,500, of whom half were whites.

**Cape Verde Islands**, a group, fourteen in number, belonging to Portugal, 350 m. W. of Cape Verde, off the W. coast of Africa. Rainy season from August to October, abundant vegetation in spite of severe droughts, cinchona, sugar, tobacco, indigo, coffee, maize, oranges, grapes, and yams are grown, and cattle are raised. Salt is obtained from the lagoons, amber is found on the coast, and in the neighbouring seas turtles abound. British consul at St. Vincent. Area, 1480 m. Pop 147,600

**Carcassonne**, a town in the department of Aude, S France, 56 m by rail S E of Toulouse, on the R. Aude and the Canal du Midi; woollens, leather, paper, and soap. Pop 31,000

**Cardiff**, a seaport of Glamorgan, South Wales, on the R Taff, 1 m. from its mouth, 29 m W of Bristol (38 by rail via Severn Tunnel), 170 m W. of London, 260 from Liverpool, and 375 from Glasgow. Enormous export of coal (especially steam coal) from the South Wales coalfield—annual amount meanwhile over 12,000,000 tons; exports also iron and tin-plate, and has industries connected with shipbuilding, iron and steel works, &c., imports iron and copper ore, espanto, provisions, and live cattle (port for foreign cattle, with very large cold storage accommodation). Magnificent docks taking the largest vessels afloat, and with ample depth for still larger ships in the future. Sea distance from London, 530 m. Pop 164,420

**Cardigan**, a seaport of Cardiganshire, Wales, on the right bank of the Teifi about 3 m from its mouth, 117 m N W of Cardiff. The county has copper, zinc, lead, and silver, and manufactures of coarse woollens, gloves, stockings, and hats. Area of county, 440,630 acres. Pop 60,237, pop of town, 3511

**Carinthia**, a mountainous province of Austria-Hungary, on the upper Drave, E of the Tyrol. Rich in minerals, producing iron, lead, and zinc ores, and has manufactures of steel, textiles, lead articles, and wood pulp. Little arable land, but great extent of pasture and forest, and horses and cattle are reared for export. Area, 4005 m. Pop 367,500

**Carlisle**, the county town of Cumberland, England, on the Eden, an important railway centre, 299 m N W of London, 102 S E of Glasgow, and 98 S of Edinburgh, has small manufactures of cotton. Pop 45,478

**Carloforte**, a port in Sardinia, harbour, 20 ft., salt-works, imports coal from Cardiff and Newcastle, and exports annually about 100,000 tons of ores, lead and calamine to Belgium, and lead to Britain and France. British vice-consul. Pop 5000

**Carlscrena**, or Karlskrona, the chief town of the province of Blekinge, or Carlscrena, S Sweden, a fortified port and principal

Swedish naval station, on five small islands in the Baltic, 350 m by rail S S W. of Stockholm. Outer harbour, vessels of any size; inner up to 20 ft. The chief imports are paddy, coal and coke, hides and skins, grain and provisions, machinery, iron and steel, coffee, and salt; and the exports granite, timber, and fish. The import trade is divided between Great Britain and Germany (though a very small proportion is carried in British bottoms), except grain, which comes from Russia and Denmark. Distance from London, 870 m, Liverpool, 1220; Glasgow, 1150, Hull, 775; Leith, 770. British vice-consul. Pop 24,000

**Carlsruhe**, or Karlsruhe, the chief town of the Grand Duchy of Baden, W Germany, 39 m by rail W N W. of Stuttgart, manufactures machinery, railway plant, iron ware, carpets, chemicals, and jewellery. Pop 97,600.

**Carmarthen**, a town in Carmarthenshire, S Wales, on the Towy, 9 m from its mouth on the Bristol Channel, 39 m by rail N W of Swansea, tin and lead works, exports of tin-plate and slate, and the making of woollens. The shire has (S E) iron, coal, lead, copper, lime, slate, and dark blue marble. Area of county, 587,816 acres. Pop 135,325, pop of town, 9935

**Carnarvon**, a seaport, and chief town of the county of the same name, near the S end of the Menai Strait, 68 m by rail W of Chester, harbour up to 16 ft. at high water, manufactures enamelled slate, exports slate, and copper ore, imports timber and coal. The shire has slate (Penrhyn), granite, lead, zinc, and manganese ore, iron pyrites, and yellow ochre. Area of county, 361,097 acres. Pop 126,835, pop. of town, 9760

**Carniola**, a hilly province of south-western Austria-Hungary, among the Alps and along the Upper Save. There are valuable forests, but the wealth of the district lies in its minerals, the quicksilver mines of Idria being the second most important in Europe, while iron, lead, zinc, and lignite are also found. There are iron works and linen manufactures, but the industries are little developed. Area, 3856 m. Pop 508,500

**Carolina, North, and South**, two of the United States, in the S E, on the Atlantic coast, with Virginia on the N, Tennessee on the W, and Georgia on the S. There is a coastline of about 600 m, of which the southern part is fringed by a line of islands famous for the production of the long-fibred Sea Island cotton. The important productions are cotton (raising and also manufacture), cottonseed oil, phosphate rock (enormously rich deposits) for the manufacture of artificial manures, pitch and yellow pine (yielding lumber, resin, and turpentine), rice, maize, coal pig-iron, china-clay, mica, granite, and

gold, silver, copper, and graphite. Carolina tobacco can hardly meanwhile be produced by itself as a paying crop, but it is grown in vacant spaces as an extra-money crop, and efforts are being made to improve the quality. The cultivation of tea is also being tried. Oysters on coast of N. Carolina, shrimps on coast of S. Carolina. Area of North Carolina, 48,580 m. Pop 1,894,000. Area of South Carolina, 30,170 m. Pop 1,340,500.

**Carpathians**, a great mountain range of S E Europe, curving round the E of Hungary and Transylvania, with a total length of about 800 m. They form the watershed between the Baltic and Black Sea, and the highest point is about 8700 ft (Geralsdorfspitze). Up to 4000 ft they are covered with timber (beeches, oaks, firs, &c), the foot-hills to the S and W have vines, and everywhere they are particularly rich in minerals—silver, copper, lead, iron, salt, coal, and petroleum. They are crossed by many passes leading N and E, and through a number of these there is now important railway communications—Buda-Pesth-Breslau-Cracow, Kaschau-Tarnov, Tokay-Przemysl, Kronstadt and Hermannstadt to Bucharest, and Tamesvar-Crajova.

**Carrara**, a town in the province of Tuscany, N Italy, on the Apennines, 30 m by rail N W. of Leghorn, famous for its marble quarries. Pop 14,000.

**Carron**, a village in Stirlingshire, Scotland, about 2 m to the N of Falkirk, with manufactures of hardware—stoves, pipes, boilers, grates, &c. Pop 1942.

**Carthagena**, a port and great naval arsenal of S E Spain, on the Mediterranean, 326 m by rail S E of Madrid. Excellent harbour, with an average depth of 28 ft and at quays 21 to 24 ft. Floating dock lifts up to 5000 tons. Exports iron, and manganiferous iron, ores (mostly to the United Kingdom, but also to United States, and to Holland for Germany), silver, silver lead, and lead (about equally between United Kingdom and France), zinc ore (mostly to Belgium and Germany), copper ore, iron pyrites (both mostly to France), ochre, esparto (both United Kingdom), oranges, lemons, pomegranates, and tinned fruits (mostly United Kingdom), grapes and other fruits (mostly France and Algeria), and wine (to the Philippines). Imports coal and coke (almost entirely from the United Kingdom), timber (Russia, Sweden, Canada, and United States), cereals, codfish (Newfoundland), chemical products (largely United Kingdom), and naval stores of all kinds. Of a tonnage of over 800,000 tons, entered and cleared, more than two-thirds were British. Regular communication with Liverpool. Distance from London, 1567 m, Liverpool, 1400; Glasgow, 1600, Cardiff, 1385. British vice-consul. Pop 86,500.

**Carthagena**, capital of Bolivar in Colombia, South America. railway to Calamar on the Magdalena, to which there is also a canal, wharf with depth of from 25 to 40 ft. alongside. exports cedar, mahogany, dye-woods, coffee, india-rubber, cocoa, cocoa-nuts, ivory nuts, balsams, hides, &c; while the imports consist of machinery, hardware, and general goods. British vice-consul. Regular communication from Liverpool and Southampton. Distance from Colon, 274 m. Letters, 23 days. Pop about 20,000.

**Casablanca**, or **Dar-al-Baida**, a port of Morocco on the Atlantic, midway between Rabat and Mazagan, open roadstead, ships loading and discharging by means of lighters carrying 10 tons. exports chick peas (France, Spain, and United Kingdom), maize, wool (France and Germany), goat and sheep skins, linseed, coriander and fenugreek seed, eggs (United Kingdom), and beans (United Kingdom and Spain), imports, from United Kingdom almost entirely, cotton, candles, tea, and provisions and canned goods, and from France sugar. The import of hardware and iron ware is passing from British to German hands because British manufacturers seem to be unwilling to produce the cheap and common cutlery, teapots, nails, enamelled ware, horse-shoes, &c, which find favour in the Morocco markets—a point to be noted, as the value of the trade is considerable. Regular communication from London. British vice-consul. Pop 10,000.

**Casumpeque**, a small seaport in Prince Edward Island, exports oysters and tinned goods, imports general goods.

**Cashmere**, or **Kashmir**, together with Jammu, forms a native state, under British protection, in the N W of India, at the western extremity of the Himalaya mountains. The surface is more mountainous than that of any other part of India. The only fertile portions are the valleys formed by the upper waters of the Indus and its tributaries, especially "the Vale of Cashmere," along the course of the upper Jhelum. The staple product is rice grown on the irrigated terraces of the mountains, while the shawls made from the hair of the Cashmere goat by the native weavers have a great reputation. The copper, silver, and lacquer work is also famous, and silk-worms are reared. In the lower valleys nearly all the fruits of the temperate zone are abundantly cultivated, and the vine is especially encouraged for the manufacture of wine. Area, 80,900 m. Pop 2,906,000.

**Caspian Sea**, on the border of Europe and Asia, and surrounded E, W, and N, by Russia, and S by Persia, is the largest inland sea in the world, being over 700 m long from N. to S, 130 to 300 m wide, and having a total area of 170,000 m. It is 300 m E of the Black Sea and 90 ft. below sea level. It is

tideless, has no outlet, has a shallow northern portion (3 to 12 fathoms), and a deeper southern portion, 420 to 516 fathoms. In winter the northern portion is frozen. Valuable fisheries—sturgeon, salmon, and other fish. Canals connecting the upper waters of the Volga with Lake Ladoga and the Duna give through communication to the Baltic Sea. The steamers on the Caspian and on the Volga use the petroleum of Baku for fuel. To Krasnovodsk there is a line of steamers for the Trans-Caspian railway, by Merv to Ferghana in Turkestan towards the Indian frontier.

Casquets, or Caskets, dangerous reefs 7 m W. of Alderney.

Cassel, the capital of Hesse-Nassau, Prussia, on the Fulda (a tributary of the Weser) which here is navigable, 120 m by rail N E of Frankfurt-on-Main, manufactures steam engines, scientific and musical instruments, cotton and linen fabrics, and sugar. Pop 106,500.

Castellamare, a seaport of S Italy, 17 m by rail S E of Naples, with a royal dockyard and ship-building yards, exports macaroni, fruits (both green and dry), cheese, oil, and potatoes, imports wheat (California, in large quantities), coal (United Kingdom), old iron, and timber, makes sail-cloth, &c, for the dock-yard.

Castro Urdiales, a seaport of N Spain, 30 m E of Santander, with which and Bilbao it is connected by rail. Exports large quantities of iron ore to United Kingdom, and lesser amounts to Holland (for Germany), France, and Belgium. A large proportion of the trade of about 400,000 tons is carried in British bottoms. British vice-consul. Pop 10,000.

Catalonia, a district in N E Spain, has such extensive manufactures of cotton, wool, silk, and lace, as to be known as the "Lancashire of Spain", excellent system of irrigation, cork, coal, iron, copper, lead, tin, zinc, coral fishery off coast.

Catania, a seaport on the E coast of Sicily, 54 m by rail N N W. of Syracuse, large harbour, with a depth of from 23 to 29 ft, sulphur refining, sulphuric acid making, cotton spinning, and mandoline making, petroleum seems to exist in neighbourhood in paying quantities, imports coal (almost entirely from United Kingdom), cereals, hides and skins, iron and other metals, petroleum, colours and dyes, chemicals, timber and furniture, woollen goods and yarn, silk goods and yarn, machinery, glass ware, and colonial produce, exports sulphur, green and dry fruits, oranges and lemons, agails, liquorice root, lemon juice, wine, oil, cereals, asphalt and mastic, cheese, salt fish, &c. Of a total value of imports and exports of about £1,800,000, Great Britain has about £200,000 nearly equally divided between the two, Austria-Hungary about twice as much (nearly all exports), and Russia a little more

than Britain (four-fifths imports). Regular communication from London and Hull. British vice-consul. Pop 150,000.

Catanzaro, a town of Calabria, S. Italy, with manufactures of silks, cottons, and woollens. British vice-consul. Pop 32,000.

Cauca, the largest of the United States of Colombia, extending along the Pacific S of the Isthmus of Panama; rich veins of gold and platinum practically undeveloped owing to transport difficulties. Area, 257,462 m. Pop 680,000.

Cayenne, the capital of French Guiana, on an island at the mouth of the river of the same name (*see* Guiana). Letters and parcels, 23 days. British vice-consul. Pop 12,500.

Ceará, the capital of a province of the same name on the N. coast of Brazil, inner harbour and entrance safe only for vessels of 16 ft, and is being gradually filled up. The bulk of the imports (more than half of £600,000) come from the United Kingdom—provisions and general merchandise, Germany nearly one-sixth, and United States more than one-eighth. Chief exports, skins and hides, cotton, rubber, and wax, about one-third of the whole going to Europe, and one-third to the United States. Of a total tonnage of over 500,000 entered and cleared, nearly one-ninth is British bottoms. Province produces also coffee, sugar, tobacco, fruits, and cattle. British vice-consul. Area, 40,240 m. Pop 806,000. Pop of town, 41,000.

Cebu, a town on an island of the same name in the Philippines, harbour, 17 ft, British shipping more than half of 100,000 tons. Exports hemp, sugar, copra, imports rice, petroleum, salt, coal, but working of coal on island has begun. Sends half of exports of £600,000 to United Kingdom, but takes no imports, direct at all events. Regular communication from Liverpool. British vice-consul. Area of island, 2289 m. Pop. 500,000. Pop of town, 35,500.

Celebes, an island of the Dutch East Indies, on the equator, separated from Borneo by the Strait of Macassar. It has a curious shape, four long finger-like peninsulas radiating N E, E, S E, and S, with mountain ranges from 6000 to 10,000 ft high running down each. The climate is healthy except on the low coast tracts, and the rainfall is, for the tropics, not excessive. There is cultivation of sago-palm, cocoa-nuts, coffee, nutmegs, tobacco, sugar-cane, and cotton, and there is also export of rubber, gums, pearls, tortoise-shell, trepang, edible birds-nests, sandal-wood, ebony, and teak. There is an inferior coal, and iron, copper, tin, and sulphur have been found. Imports textiles, drugs, and general goods. Area, 71,470 m. Pop about 2,000,000.

Central America, the long, narrow portion of the American continent, between 21° and 8° N, uniting North and South America, with

an extreme length of about 1000 m, and a breadth of from 70 to over 300 The northern part is mountainous, with a steep slope to the Pacific, and a tableland, intersected by valleys, sloping more gradually to the Atlantic, the narrow southern part is mountain from sea to sea. Total area, 181,118 m

Cephalonia, one of the Ionian Islands, Greece, 32 m long and from 2 to 12 broad, with an area of 256 m, mountainous, highest point 5300 ft The chief productions are currants, olive-oil, wine, grain, and pulse, chief exports currants (mostly to Holland), and wine (mostly to Germany, for blending) To the United Kingdom the exports are very small, but the imports from Britain amount to over one-fifth of a total of about £127,000 Even about one-fifth of the currant and wine trade is carried in British bottoms Germany is pressing in hand-ware From other parts of Greece there is import of flour, fruit, vegetables, and provisions, cottons and woollens, yarns, tobacco, petroleum, &c., and to them exports of wine, cheese, oil, fruit, &c British vice-consul Pop 84,000

Cette, a seaport in the department of Herault, S France, on the Mediterranean The harbour has a depth of 24 ft, and a broad and deep canal connects it with the Lagoon of Thau, and thence, by the Canal du Midi, there is passage to the Rhone and other water-ways The chief industries are connected with ship-building, glass works, salt works, grape sugar and syrup factories, and important oyster and anchovy fisheries Exports manures, coal, salt, wine, spirits, brandy, and fruits Imports coal-tar, pitch, coal, tallow, petroleum, iron ore, foreign wines for blending, sulphur, grain, oranges, and timber British vice-consul Pop 33,500

Ceylon, an island and British Crown Colony at the southern extremity of India The island consists largely of undulating plains, but the S is mountainous in the interior, the highest point reaching 8300 ft The extreme length is 266 m, the greatest width about 145 m, the area 25,333 m., and the population 3,577,000 The island is separated from India by the Gulf of Manaar and Palk Strait, with a width of from 32 to 120 m These two openings have between them a chain of islands so close to one another, and with such shallow water between, that it has been proposed to carry a railway across The climate is cooler than in India, and healthy, except on the coast The N E and S E get little rain and need irrigation, but the S W is damp, as it has the rainfall of both monsoons Iron is obtainable in considerable quantities, while the veins of plumbago are very rich and valuable. Anthracite is also found, and the gems of Ceylon—rubies, sapphires, cat's-eyes, topazes, &c—have always been famous The pearl fishery (a government monopoly) is important, but very

variable in output. Salt-making is also a government monopoly For long the chief product of the island was coffee, but of recent years this has fallen off considerably owing to a fungoid disease affecting the plants, and tea-planting has become the staple industry. The cultivation of cinchona is now also important, Ceylon being the chief source of European supply, and there is cultivation of cinnamon, cacao, tobacco, cardamoms, cocoa-nuts, areca-nuts, india-rubber, camphor, and rice, all except the last are exported, as well as coconut oil, coir, and copra Palmyra palm leaves yield a bristle-like fibre Elephants are exported to India The chief imports are cotton goods, iron, machinery, coal and coke, rice (from India), salt fish, provisions, and liquors. The total import is over £8,000,000, and the export over £7,000,000; while of a trade, entered and cleared, of over 8,000,000 tons, 7,000,000 are carried in British bottoms Pop. 3,577,000.

Ohad, Lake, in the central Soudan, with an area of about 10,400 m, varying according as the season is wet or dry, 830 ft. above sea-level. The north-eastern and part of the southern shores are in the French sphere, part of the S shore in the German Cameroons, and the south-eastern shore in British Northern Nigeria

Ohalon-sur-Saône, the chief town of the department of Saône-et-Loire, central E France, at the entrance to the Canal du Centre connecting the Saône with the Loire, and so communicating with the Atlantic by the Loire, and with the Mediterranean by the Rhone; has iron and copper foundries, shipbuilding and machinery shops, and manufactures of glass, paper, and chemicals Pop 24,300

Chambéry, a town of Savoie, France, 45 m S W of Geneva, with manufactures of clocks, paper, silk gauze, and hats Pop 22,500

Champagne, a district of France, about the head-waters of the Marne and Seine, famous for its wines, red and white, the best being produced at Rheims and Epernay

Champlain, a lake of the United States, between New York and Vermont, 110 m long, 1 to 13 wide, about 280 ft. deep, and with an area of 595 m It is connected by the navigable Richelieu with the St Lawrence, and by the Champlain Canal with the Hudson.

Channel, The, or The English Channel, is the narrow sea between England and France, extending from the Strait of Dover, where it is 21 m wide, to the Chops between the Scilly Isles and Ushant, where the distance across is 110 m The greatest breadth is 140 m between Sidmouth and St Malo, between Brighton and Havre it is 90 m wide It is shallowest at the Strait of Dover, 12 to 30 fathoms, but the average depth over its centre is 30 fathoms

Chantabun, or Ohentabun, a port on the

Gulf of Siam, 130 m. S.E. of Bangkok, at the mouth of the Chantabun R., in the possession of France; ruby and sapphire mines Pop 30,000

Charleroi, a town in Hainault, Belgium, on the Sambre, 35 m by rail S. of Brussels. There are collieries in the neighbourhood, great iron works, smelting furnaces, and nail factories, manufactures hardware, glass, woollen cloth and yarn. Pop 25,000

Charleston, a large city in South Carolina, United States, at the junction of the Ashley and Cooper Rivers, 7 m from the sea, 118 m by rail N.E. of Savannah, and 580 S.W. of Baltimore. Connected with Santee R. by Santee Canal. The bar, at present 27 ft at its deepest, is to be dredged to 32 ft. in connection with the establishment of a naval station, and the whole harbour brought to the same depth. The exports are the leading products of the states of North and South Carolina, Georgia, and Tennessee, to which it is hoped to add grain; and the imports, general goods, iron and steel, chemicals (to be used in connection with the district phosphate rock for the production of manure), West Indian fruits, naval stores, &c. Of a total trade, entered and cleared, of about 2,000,000 tons, Britain has about one-twelfth. British consul. Pop 56,000

Charlottenburg, a town in Brandenburg, Prussia, on the Spree, 3 m W. of Berlin, of which it is practically a suburb; stained glass, iron ware, machinery, porcelain, leather, paper, chemicals, and beer. Pop 189,500

Charlottetown, the capital of Prince Edward Island, Canada, on the estuary of the Hillsborough R. on the S coast; excellent harbour, admitting vessels drawing 27½ ft; river navigable for some 10 to 18 m up. Exports fish and oysters; imports West Indian produce, and general merchandise of all sorts. Pop 12,000

fabrics, iron works, saw-mills, and tanneries. Pop. 35,000.

Chaux-de-Fonds, a town in Neuchâtel, Switzerland, 18 m by rail N.W. of Neuchâtel, with important watch manufactures. Pop. 36,500

Che-foo, or Chifu, a treaty port on the N.W. coast of the peninsula of Shantung, at the entrance to the Gulf of Pechili. Being the northernmost port open during the winter (December to March), it has a large trade. Harbour with a depth of 18 to 30 ft, but exposed to all northerly winds. Exports straw-braid, beans and bean-cake (used as manure for sugar plantations at Swatow and other southern districts), vermicelli, cattle, dried and salt fish, ground nuts, and ground-nut oil. Imports cotton sheetings, yarn, &c, opium, kerosene oil, coal, iron, matches, and sugar, and native produce—rice-paper and joss-paper, silk and silk goods, wheat, and sugar. American jeans are driving the British article from the market, and Japanese sheeting and yarn are making rapid headway against the British and Indian productions, while Japanese matches, being well made and—a most essential point for these markets—cheap, have practically superseded those of European manufacture. Of a total trade of over 2,000,000 tons about three-sevenths are British. Regular communication from London and Middlesborough. British consul. Pop 32,000

Chemnitz, a town of Saxony, Germany ("the Saxon Manchester"), 43 m by rail W.S.W. of Dresden. Important coal centre, with spinning and weaving (cotton, wool, silk, &c) of all kinds—carpets, table-cloths, upholstery and furniture cloths, dress goods, mohairs, plushes, curtains, net, &c.; dyeing machinery, hosiery, underwear, lace, and woven gloves. British vice-consul. Pop 207,000

Cheshire, a seaboard county in the west of England, on the Mersey and the Dee, surface flat, with excellent river and canal navigation, including the Manchester Ship Canal, coal, rock salt, and brine springs, and cheese Area, 657,068 acres Pop 814,555

Chester, the chief town of Cheshire, England, on the right bank of the Dee, 22 m from the mouth of the estuary, and 16 m S E of Liverpool Manufactures boots and shoes, lead pipes and shot, leather, and gloves Pop 36,281

Chester, a town in Pennsylvania, United States, on the Delaware R, 15 m below Philadelphia, with large shipbuilding yards, and manufactures of engines, and of cotton and woollen goods Pop 34,000

Chesterfield, a town of Derbyshire, England, on the Rother, 12½ m by rail S E of Sheffield, and connected with the Trent by a canal. Manufactures of wool, silk, lace, machinery, and earthenware, coal, iron, and lead, centre Pop 27,185

Chicago, the second city of the United States, in Illinois, at the mouth of the Chicago R, near the S end of Lake Michigan, and connected with the Mississippi by the Illinois-Michigan Canal. The city is 21 m long by 11 wide, and has an area of some 200 m It is one of the busiest commercial places in the world, acting as a distributing centre to, and a collecting centre from, a large district rapidly increasing in wealth and population. Probably twenty states do their wholesale buying in Chicago, and within a radius of 500 m there is a population now of over 40,000,000 Natural advantages of situation, railway and water-way facilities, enterprising merchants, and keen commercial and manufacturing spirit, have made the city what it is to-day No man thrives in Chicago who works grudgingly, with an eye on the clock, and men gratify their tastes, and take their pleasures, as relaxations, not to be allowed in any way to interfere with business The trade in grain, flour, and pork, is enormous, and far surpasses anything else of the same kind in the world, while in 1901 the factories or workshops connected with hog- and beef-packing, soap, rolling mills, foundries, machinery, waggons, agricultural implements, cars, bridges, elevators, tanneries, boot and shoe making, smelting and refining, electric supplies, jewellery and optical goods, sashes, doors and boxes, furniture, pianos and organs, breweries, tobacco, clothing, cloaks and furs, millinery, printing, bakeries, and coffee and spice mills, each turned out products valued, in the lowest case, at over £2,000,000, and some of them much more, the highest being £15,000,000 and £10,000,000 for the first two In the same year the wholesale houses in dry goods and carpets, groceries, lumber, manufactured iron, clothing, boots and shoes,

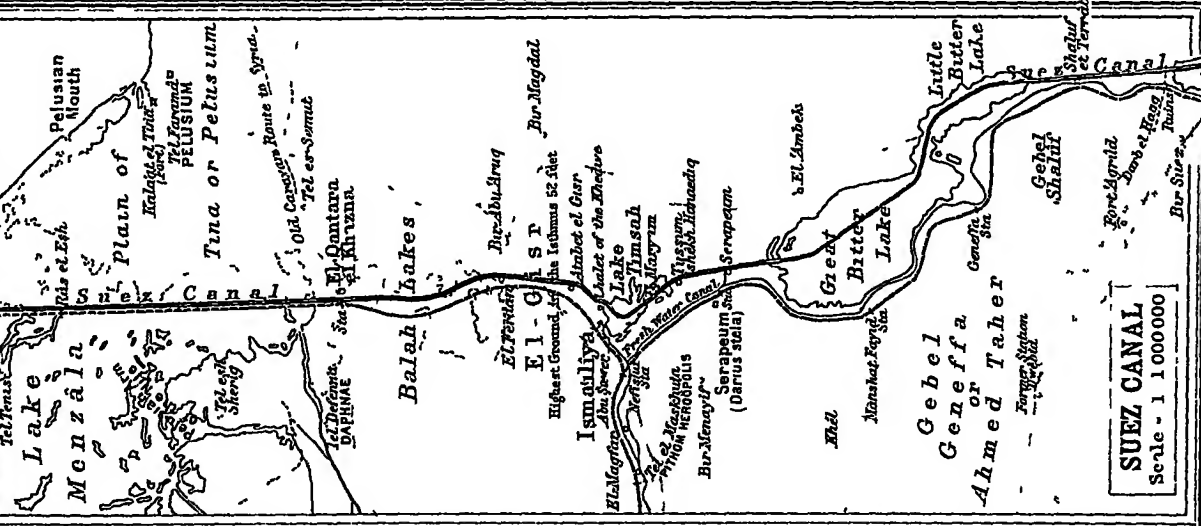
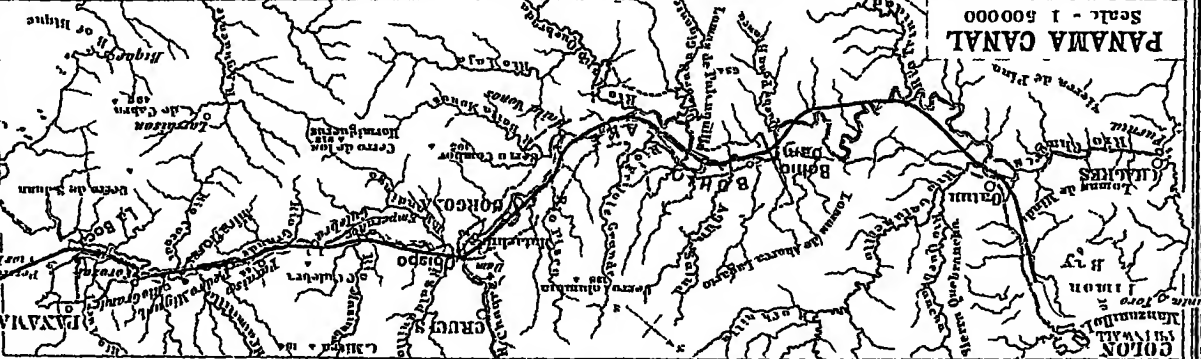
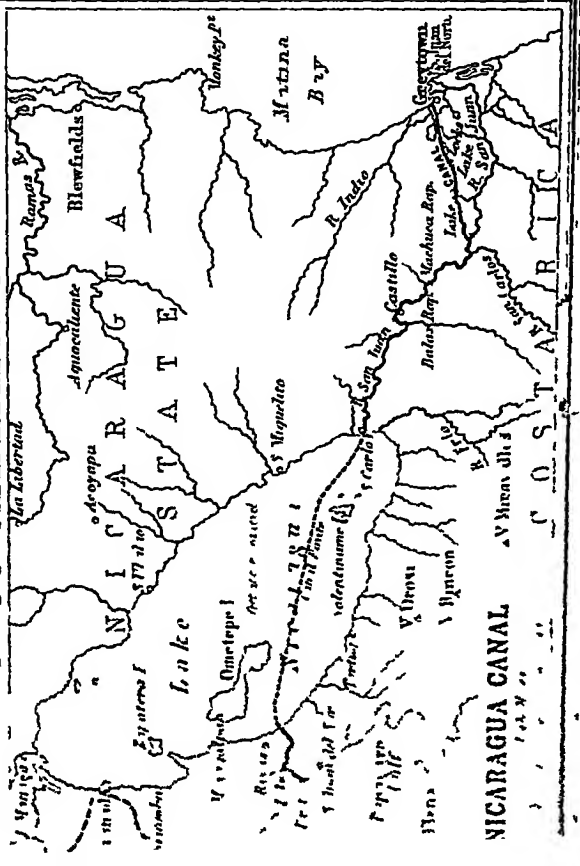
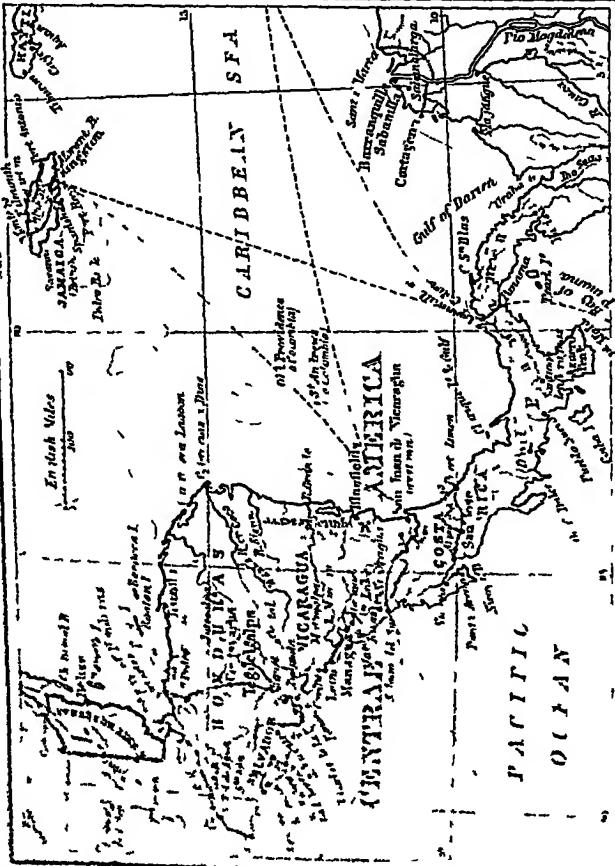
drugs and chemicals, hats and caps, tobacco, fish and oysters, furs, books, papers, pig-iron, coal, hardware, cutlery, liquors, and jewellery and watches, had estimated annual values of from £2,000,000 to £28,600,000 Every one, of whatever degree, works his hardest, and labour-saving machinery is everywhere in evidence, while to see one artisan taking charge of two lathes, or attending to ten automatic machines, gives a hint to our home workers Cold storage in connection with all perishable articles—meat, fish, eggs, poultry, butter, cheese, milk, fruits, vegetables, &c, is amply provided and carefully regulated, with different temperatures to suit the particular articles Letters, 9½ days British consul Pop. 1,699,000

Chiengmai, a name applied to the greater part of northern Siam District has a large output of teak, exports cattle to Burma, and receives from it cottons, woollens, cloths, silk, hardware, and jewellery British consul

Chile—*Surface and Size*—Chile is the most stable and prosperous of the South American republics, lying along the W coast between the crest of the main chain of the Andes and the Pacific, and extending from 17° to 55° 58' S., the latter point at Cape Horn at the extreme S end of South America The greatest length is about 2650 m, the breadth—very small in proportion—varies from 60 to 200 m, and the area is 279,901 m Chile is bounded N by Peru, and E by Bolivia and the Argentine (*see* Argentine) The surface has, roughly speaking, a general slope from E to W, and also from N to S, for the Andes are higher in the N than in the S Their average height is about 9000 ft., but they rise here to some of the loftiest peaks of the range, the highest being Aconcagua (22,867) Many of these mountains are dormant, or sub-dormant, volcanoes From E to W there is the slope of the Andes, a central valley tableland, a Coast Cordillera, and a coastal strip. The first slopes down as it passes southward, and finally dips under the sea, so that the Coast Cordillera takes the form of a chain of islands running parallel to all the southern third of the coast and curving southward round Tierra del Fuego The solitary island of Juan Fernander, 415 m W. of Valparaiso, also belongs to Chile As the mountains lie so near the sea none of the rivers are of any length or importance, those in the dry northern district disappearing before reaching the coast, the chief are the Maipo, in the valley tableland at Santiago, the Biobio at Concepcion (navigable for 100 m), and the Valdivia with a sheltered roadstead at the mouth

*Government, &c*—The government is a republic on the model of the United States, the president holding office for five years and legislative power lying with Congress, consist-

# INTER-OCEANIC CANALS.



**SUEZ CANAL**  
Scale - 1 1000000

**PANAMA CANAL**  
Scale - 1 500000



ing of a Senate and a Chamber of Deputies. The total mileage of navigable rivers is less than 1000 m, but the road mileage, 23,000, is good when the state of development of the country is considered. There are about 3000 m of railway, of which nearly half belongs to the state. The line by Santa Rosa across the Andes (*see* Andes) to the Argentine system will give communication with Buenos Ayres (distance from Valparaíso 880 m) and afford a new route between Great Britain and Australia and New Zealand of about 11,000 m from Liverpool to Wellington. It is possible also that there may be trans-andean communication effected farther to the S, as there is now in the N (Antofagasta). The chief trunk line is from Valparaíso southward along the central valley as far meantime as the province of Malleco about 1600 m. It will be extended to Valdivia or farther.

*Resources, Trade, &c.*—The soil of the valleys in the central provinces is very fertile, and more than half of the inhabitants are engaged in agricultural pursuits—the growing of wheat and other cereals, cattle and sheep rearing, the growing of vines (wine and raisins), oranges, figs, olives, and other fruits, and beet-root; and silk production. The southern districts and many of the islands have dense forests. The northern rainless provinces have enormous deposits of nitrates, which form a great source of wealth, and of which nearly 1,500,000 tons are exported every year. Of this some 40 per cent. goes to Germany, 24 to France, 20 to the United Kingdom, and 16 to Belgium. There are also borax and salt. In many districts in the N there is also mining of copper, silver, manganese, gold, cobalt, iron, and sulphur; and in the central and southern provinces there is coal (Arauco and elsewhere). The leading industries (all protected by a very heavy tariff) are copper-smelting, sugar-refining, manufactures of soap, candles, and other chemicals (nitrates), tanning, and making of boots, shoes, woollens, and linens. Of a total import of nearly £10,500,000, the British Empire sends nearly 50 per cent., Germany coming next with 26, and then the United States with 9. The principal articles sent from the United Kingdom are cottons, woollens, and worsteds, iron, brass, and copper, and the manufactures thereof, coal and fuel, machinery, apparel and haberdashery, bags and sacks, candles, caoutchouc manufactures, railway carriages and parts thereof, cement, chemicals (drugs, colours, dye-stuffs, carbide, &c.), linen and jute manufactures, oil-cloth, cordage and twine, hardware and cutlery, earthenware, implements and tools, leather and leather goods, oil-seed, spirits, and paper and stationery. The chief exports to the United Kingdom are copper, and copper ore and regulus; nitrate of soda, guano, wool, tin (transit from Bolivia), silver ore,

barley and other grains, and flour; skins and furs, borax, caoutchouc, raw coffee, raw cotton, Peruvian bark, manganese ore, sugar, and raw vegetables. Of a total export of £12,900,000, the British Empire receives about 65 per cent., Germany about 13, France about 6, and the United States about 4. German competition in cheap underwear, socks, stockings, hats, buttons, trimmings, &c., and United States competition in bar and sheet-iron, wire, nails, engineering tools, locomotives, railway cars and waggons, &c., are making themselves steadily felt, seemingly more from the manufacturers of these two countries trying to suit the demands of the market they are dealing with, by giving just what it requires and not what they happen to make, than from cheapness. They are largely helped also by having their price lists, catalogues, and books of instructions, &c., in the language of the country, and with weights, sizes, prices, &c., in the systems understood by those to whom they send, by their attractive methods of getting up these, and also their samples, and, in the case of Germans at all events, by their giving credit for four months, six months, or even longer. Tariff considerations should also be attended to; *e.g.* clothing is much cheaper if it be sent cut and finished, ready for making up, than if it be made up beforehand. It is important to keep down the weight of cases and inside packing (using fibre, for example, instead of sawdust), as duty is charged on the gross weight. Much more might be made of many branches of trade were matters pressed with energy and by suitable travellers on the spot. The British Chargé d'Affaires at Santiago in a trade report to the Foreign Office (2736, annual series, 1901) enumerates no fewer than 111 articles—varying in importance from cod-liver oil and corsets to pianos, scientific instruments, and machinery—imported into Chile from both Britain and Germany, of which he thinks the British share ought to be greater. There is a British consul-general at Valparaíso, and consuls at Coquimbo and Iquique. Letter postage, 2½d per half-oz., postcards, 1d, parcels not over 3 lbs, *via* Pacific Steam Navigation Company's steamers from Liverpool, 3s 9d., between 3 and 7, 4s 2d., between 7 and 11, 4s 7d., *via* France 1d more in each case, telegrams, 5s 9d per word, mails made up in London once a week or oftener.

*Money, &c.*—The standard is gold, and the unit of account is the peso. The gold condor, doblon, and escudo are worth 20, 10, and 5 pesos respectively, of silver there are pesos and pieces equal to one-fifth, one-tenth, and one-twentieth of a peso, and there are bronze centavo and two centavo pieces. The metric system is that fixed by law, but the old Spanish weights and measures (*see* Spain) are still in partial use. The Chilean flag has in the upper

corner next the staff a blue square bearing a large five-pointed white star, the blue square is continued to the edge by a white bar, and there is an under bar entirely of red

**China.—Surface and Size**—China is a great empire of eastern Asia, lying between 18° and 52° N and between 74° and 135° E, and bounded NW and N by Russia, E by Russia, Corea, the Yellow Sea, and the Eastern Sea, and S and SW by the South China Sea, French Indo-China, Burma, and India. The empire is divided into Chinese Turkestan, and Tibet, in the W, Mongolia in the N, Manchuria in the NE, and China Proper in the SE. Manchuria and Tibet are separately noticed, and Turkestan and Mongolia are not commercially important. China Proper, which is here dealt with, extends from 18° to 47° N and from 98° to 135° E, and has an area of about 1,400,000 m, while the area of the empire is about 4,250,000 m. Along the E, from the region N of the Gulf of Pechili to that S of Hangchow Bay, there is a great plain, broken only by the hilly peninsula of Shantung. Elsewhere the surface is mountainous, or hilly plateau. The valleys of the N are filled to enormous depths with the rich yellow earth known as loess. The drainage of the N is carried off mainly by the Hoang Ho and its tributaries, of the centre mainly by the Yang-tse-kiang and its tributaries, and of the S by the Si-kiang or West River and its tributaries. The temperature in the N, at ordinary heights, is from 23° to 80° Fahr, and in the S from 60° to 85°, while there is everywhere a sufficiency of rain for agriculture, with wet winds off the sea in summer, and dry winds from the interior of the continent in winter.

**Government, &c**—The government is by an Emperor, in accordance with the regulations of the dynasty (which prescribe a government of the state on the same lines as that of a family), and with the management of affairs in the hands of a General Board of State Affairs. This consists of a Cabinet, and eight boards each administering a department—foreign affairs (superior to all the others), finance, army, navy, &c. The pop of China Proper is estimated at 380,600,000, and of the empire at 426,547,000. About 17,000 of the whole are foreigners (one-third British), and of these nearly half are at Shanghai. The roads are in most cases little better than mere tracks, and the railways, exclusive of the Russian lines (see Siberian Railway), are confined to the NE, and have a very small mileage. Elsewhere traffic is carried on mainly by the great rivers, and along the canals. Of the latter the chief is the Grand Canal which passes from Peking southward along the great eastern plain to Hangchow, with a length of 600 m, and would provide good communication were it only kept in order.

**Productions and Resources**—China is meanwhile an agricultural country, the soil, which is everywhere fertile, especially in the loess districts, producing heavy crops of all necessary food-stuffs—wheat, barley, maize, millet, beans, and peas, mainly in the N; and rice mainly in the S. The land is mostly in small holdings, and is held by families, freehold, on payment of a yearly tax. Other vegetable products of great importance are mulberries for silk-worm rearing—almost everywhere, but the chief silk-producing districts are the middle E, middle W, and S.—tea all over the middle W., centre, and S and SE, sugar, indigo, and cotton in the S, opium almost everywhere, oil-seed plants, rhubarb, tobacco, ginseng, cinnamon, gum-producing shrubs, &c. The country is exceedingly rich in minerals, especially coal, the fields of this in Shansi and Hunan (N and centre S) alone covering over 50,000 m, while elsewhere there is like abundance, and there are rich deposits of iron, copper, quicksilver, china-clay, lead, tin, silver, &c. The working is, meanwhile, limited owing to difficulties of access and transit. The hope lies in railway extension, but that is distant, and at present mining machinery can hardly be taken to the fields, and minerals cannot be brought to a distributing port, at prices that will prove remunerative. One mining company had recently to employ 30 men for 6 weeks to move a boiler a distance of 17 m. The industries are many, the most important being the winding, weaving, and embroidery of silk, the production of porcelain and lacquered wares, the making of grass cloth, carving in wood, ivory, bone, &c, the making of iron and steel, metal goods, paper, china-ink, bells, gongs, the milling of wheat and rice, and of recent years the spinning and weaving of cotton in large mills. The question of how these last will ultimately affect the Indian spinning mills, of the yarn from which China takes 95 per cent, is of moment. The Chinese cotton is whiter than the Indian, cleaner, generally longer in the staple, and absorbs dyes more thoroughly, so that the yarn, count for count, commands a price 6 to 7 per cent. higher, coal in China also costs less, and the climate at Shanghai and elsewhere is damper and therefore more suitable for spinning. On the other hand Indian labour is cheaper.

**Trade**—Owing to lack of precision in Chinese methods and figures it is difficult to give an accurate account of the foreign trade of the country, and of the enormous internal trade estimate even is hardly possible. The total foreign import is valued at £35,000,000 and the foreign export at £28,000,000. Of the former the United Kingdom sends over £6,000,000, Hong Kong, over £17,000,000, India, over £4,000,000, other parts of the British Empire, about £900,000; the United

States, £3,500,000, and Continental Europe, exclusive of Russia, £2,500,000 (nearly two-thirds from Hamburg). Of the exports the United Kingdom receives nearly £3,000,000, Hong Kong, £10,500,000, India, £400,000; other parts of the British Empire, £500,000, the United States, £2,000,000; and Continental Europe, £4,000,000. There is a large trade with Japan, and to Russia goods go mostly overland. The proportion of British trade to the whole seems from the Chinese returns to have fallen in recent years from 56 per cent to 51, but it is difficult to arrive at a true result as the Chinese figures for British imports and the figures in the Board of Trade Annual Statement show a difference of 48 per cent, which is against the United Kingdom. Of the imports the cotton goods are valued at one-third and opium at one-eighth, and the other leading articles are kerosene, sugar, metals (ironware, tin-plate, steel, nail-rod, copper, spelter, galvanised sheets, &c.), woollens, flour, cigarettes, indigo and other dyes, soap, paints, &c. Of the exports silk (raw and woven, but mainly raw) makes up over one-third, and tea one-eighth, and the other leading articles are raw cotton, bean-cake, hides and skins, beans, straw braid, mats and matting, vegetable oil, paper, tobacco, wool, sugar, rhubarb, and sesame. The bulk of the wool is used for carpet manufacture and goes to the United States. Excluding the Hong Kong trade, the chief imports received by the United Kingdom are silk, tea, manufactures of skins and furs, furs, straw braid, and bristles, and the chief article of British produce sent, cottons and cotton yarn (more than two-thirds of whole), woollens and worsteds, iron (wrought and unwrought), soap, machinery, coal, chemicals, telegraph wire and apparatus, candles, and drugs. Firms should make it worth the while of young men to learn Chinese on the spot, those that have already done so have reaped their reward. A knowledge of the language brings with it a more intimate knowledge of the people, their ways of thinking, and their requirements. As many articles as possible should be shown by sample, and efforts should be made to supply the native not only with things that tempt his fancy but with articles of daily use—machine-made hats, shoes, &c. There seems no reason why Britain should be beaten by continental makers of lamps, hardware, &c., and though it may not pay a single firm to send out a special representative, a number might combine for the purpose. There are British consuls-general at Peking, Canton, Hangkow, Shanghai, and Tientsin, and consuls and vice-consuls at all places of commercial importance. Mails to and from London once a week or oftener, letters, 2d per half-oz, postcards, 1d, parcels under 3 lbs, from 1s. to 3s; between

3 and 7, 2s to 3s 6d., between 7 and 11, between 3s and 4s, money orders to and from certain of the treaty ports; telegrams, *ad* Turkey, 5s 5d a word, other routes, 5s 6d.

*Money, &c.*—The unit of account, the *haik-wan tael*, is at present worth about 3s, *tael*=1600 copper cash or thereby, silver Canton dollar, United States dollar, or Japanese yen, a *liang* (*tael*)= $1\frac{1}{2}$  oz avoirdupois; *kin*= $1\frac{1}{2}$  lbs, *picul* or *tann*=133 $\frac{1}{2}$  lbs; *chih*=14 1 inches, *chang*=10 *chih*; *li*=720 yards. The merchant flag has a red ground with a yellow circle in the centre, and the imperial standard is triangular with a yellow ground on which is emblazoned a blue imperial dragon looking up at a small red circle in the upper corner.

*Chinde*, a seaport at the mouth of the river of the same name, the only navigable opening of the Zambesi, Portuguese East Africa, port for British Central Africa, and the S E portion of the Congo Free State. Depth on bar 12 to 18 ft. Imports general goods, exports ivory, hippopotamus teeth, rubber, gum, copal, wax, ebony, sesame, *strophanthus*, &c. British shipping more than a third of nearly 70,000 tons. Regular communication from London and Southampton. British vice-consul. Pop 1600 (220 Europeans).

*Chinkiang*, port at mouth of Yang-tse-Kiang, China, 40 m N E of Nanking, 150 N W of Shanghai. Of a trade entered and cleared of over 5,000,000 tons, half is British, and of the steam launch inland navigation by river and canal about one-sixth is also British. Chief imports cottons (mostly American, British, and Indian), cotton yarn (nearly all Indian), opium (India), petroleum (American and Russian), sugar, matches (Japan), *bêche-de-mer*, coal, and aniline dyes, also native goods—wood oil, wood for poles and coffins, vegetable tallow, sugar, and cotton yarn. British soda and artificial manures have begun to find a market. The total import is nearly £3,000,000, but it is impossible to tell what countries it comes from. The staple exports are bean-cake, beans, peas, ground nuts, ground-nut oil, hides, silk, and dried lily flowers. British consul. Pop 140,000.

*Chios*, one of the most fertile islands of the *Ægean Archipelago*, Turkey, off the entrance to the Gulf of Smyrna, 7 m from the coast, 30 m long, 3 to 15 wide, and with an area of 320 m<sup>2</sup>; mountainous but fertile, produces wine, figs, lemons, olives, oranges, antimony, mastic, silk, and goats' skins. Pop 59,000.

*Chittagong*, a port of Bengal, India, 12 m from the mouth of the Karnaphuli R., 130 m S E of Dacca, and 220 E of Calcutta, 24 ft on bar at high water, imports Liverpool salt and kerosene oil, exports rice, jute, tea, and cotton. Regular communication from Liverpool. Distance from Calcutta, 355 m. Pop 22,500.

*Cholet*, a town in the department of Maine-et-Loire, France, on the right bank of the Maine, 32 m. by rail S.W. of Angers, with

manufactures of woollen, linen, and mixed, fabrics. Pop 19,500

Chorley, a town of Lancashire, England, 9 m. by rail S. of Preston. In the neighbourhood are coal-mines and stone quarries, print works, and bleach-fields, while the town has manufactures of cotton yarn, calico, muslin, fancy goods, and railway waggons Pop 26,850

Christchurch, capital of the province of Canterbury, New Zealand, on the R. Avon, 8 m. by rail from Port Lyttleton Manufactures boots and shoes, woollens, and agricultural implements. Pop with suburbs, 57,000

Christiana, the capital and principal commercial town of Norway, in the S, at the N end of Christiana Fiord, opening off the Skager Rack. Vessels drawing 17 to 20 ft at quays, graving dock 255 ft long, important shipping trade as being a centre of distribution for the S of Norway, receiving about half the imports and sending out about a quarter of the exports of the whole country; makes Christiana lager beer, canvas, woollens, matches, and paper from saw-mill waste, harbour closed by ice for three or four months in winter Imports coal, machinery, iron, steel, and general goods, exports timber, wood-pulp, matches, fish, fish-oil, condensed milk, margarine, and horse-shoe nails Regular communication from Hull and Manchester Distance from London, 656 m; Liverpool, 1000, Hull, 558, Leith, 550 Letters, 2½ days; parcels, 3 days direct, 5 days by Bergen British consul-general Pop 228,000

Christiansand, a port of southern Norway, on a fiord off the Skager Rack, harbour with great depth of water, dry dock 320 ft. long, shipbuilding Exports timber, salt cod, lobsters, salmon, and ptarmigan (all three for London), cattle, and oak bark; imports coal, salt, and general goods Regular communication from Leith and Hull Distance from London, 511 m, Liverpool, 845, Hull, 400, Leith, 395 British vice-consul Pop 15,000

Christiansund, a port on three islands off the W coast of Norway, 350 m N of Christiansand, and 85 W S W of Trondhjem Exports large quantities of dried cod and salt fish (to Spain and Italy), and also timber, fish-oil, herring, and tar, imports coal, iron, salt, flax and hemp, and general goods Regular communication from Hull, distance about 680 m British vice-consul Pop 12,000

Christmas Island, 200 m S W of Java, 6 m long by 5 broad, has enormous phosphate deposits (lump and granular) worked by a British company, under government of Straits Settlements, will produce oranges, limes, custard apples, and coffee. Pop 500, mostly Chinese and Malays employed by the Phosphate Company

Cincinnati, the largest town of Ohio, United States, on the N bank of the Ohio R, and 270 m by rail S E of Chicago, which it

resembles in so far as its chief industries are the transporting of grain and trade in pork. There are great stockyards and slaughter-houses which have given it the name of "Porkopolis." The town has besides foundries, machine shops, carriage works, factories for the manufacture of clothes, furniture, leather, shoes, tobacco, &c, and it is famous for its decorative pottery and wood-carving. There is a large river and canal traffic Pop 326,000.

Ciudad Bolivar, or Angostura, a town of Venezuela, on the Orinoco, 240 m from its mouth, accessible at all times for vessels of not over 12 ft. draught. Exports gold, tobacco, rubber, balata, cattle, hides, deer skins, cocoa, coffee, copiba, and heron egrets; imports manufactured goods and provisions. Regular communication from London. Pop 12,000

Civita Vecchia, a port in the province of Rome, Italy, 50 m by rail N W. of Rome, harbour 17 to 22 ft. Of the imports two-thirds come from Britain, but only about one-seventh is now carried in British bottoms from the United Kingdom, though half of the total trade is still carried by vessels flying the British flag Imports coal, coke, fire-bricks, old- and pig-iron (all mostly from the United Kingdom), hardware, phosphates (for manure), textiles, and general goods, exports staves (to Spain and France), charcoal to Marseilles, alum to Rouen, and cement, &c, to other Italian ports British vice-consul. Pop 18,000

Clare, a county in Munster, Ireland, with coal and slate, and manufactures of freize and hosiery Area, 88,331 acres Pop 112,334

Cleckheaton, a town in the West Riding of Yorkshire, England, 5 m S E of Bradford, with manufactures of textiles and machinery. Pop 12,523

Clermont-Ferrand, the chief town in the department of Puy-de-Dôme, central France, 135 m by rail S of Paris, with manufactures of macaroni, semolina, candied fruit, wax matches, chemicals, machinery, linens and woollens, lace, and ropes. Pop 53,000

Cleveland, a mountainous district in the N E of Yorkshire, England, rich in iron ore.

Cleveland, a town in Ohio, United States, on the southern shore of Lake Erie, 350 m by rail E of Chicago, and on Cuyahoga R, which forms the inner harbour, the northern terminus of the Ohio Canal as well as a great railway centre, chief centre in United States for iron ore, and has a great lumber and coal trade, iron manufacture in all branches, from ships and bridges to sewing-machines and screws, petroleum refining Pop 382,000

Clitheroe, a town on the Ribble, Lancashire, England, 35 m N of Manchester, with cotton and paper mills, and limestone and barytes quarries in neighbourhood Pop 11,414

Clyde, a large river of W Scotland, length about 106 m, area of basin, 1600 m

**Clydebank**, a town on N bank of the Clyde, Dumbartonshire, Scotland, 5½ m. N.W. of Glasgow, with great shipbuilding yards and sewing-machine works Pop 21,691.

**Coahuila**, a state of Mexico on N. frontier, with coal, silver, iron, and lead. Area, 63,661 m Pop 281,000

**Coatbridge**, a town of Lanarkshire, Scotland, 9 m by rail E of Glasgow; coal and iron centre, manufactures malleable iron, boilers, tubes, railway waggons, fire-bricks, and tiles Pop. 36,991

**Coblentz**, a town of Rhenish Prussia, at the junction of the Rhine and Moselle, transport trade, manufactures cigars, furniture, and japanned goods. Pop 16,500

**Cochin**, an important seaport near the S end of the W coast of India, 97 m S of Calicut, next in importance to Bombay; bar with only 15 ft of water a hindrance Exports rope, coir yarn, hides, fibre and matting, fish, coconut and grass oils, drugs, lemons, turmeric, rice, pepper, cotton, coffee, sugar-cane, arrow root, teak and other woods, imports European goods, hardware, sheet-copper, rice, medicines, fruits, sugar, grain, and paraffin Regular communication from London and Cardiff Distance from London, 6535 m; Liverpool, 6460, and Glasgow, 6570. Pop 19,000

**Cochin-China.** See French Indo-China

**Cocos, or Keeling, Islands**, a group of twenty small coral islands, under Straits Settlements, 700 m S.W. of Sumatra, and 1200 m S.W. of Singapore Exports cocoa-nuts, copra, and cocoa-nut oil Pop 700.

**Cognac**, a town in the department of Charente, S.W. France, 42 m S.E. of Rochefort, centre of brandy district Pop 19,500

**Cohoes**, a town of New York, United States, on the Hudson R and the Erie Canal, with cotton and hosiery mills, and manufactures of axes, machinery, and gas-piping. Pop 24,000

**Colastine**, in the Argentine Republic, on the R Paraná, the port of Santa Fé 12 m. distant, least depth on bars of channel, 12 ft. Exports wheat, linseed, quebracho; more than half the trade of 450,000 tons, entered and cleared, is British British vice-consul

**Colberg, or Kolberg**, a seaport of Pomerania, Prussia, on the Baltic, at the mouth of the Persante, 15 ft. at entrance to harbour, manufactures woollens, spirits, and agricultural machines Exports grain, potatoes, pit-props and other timber, imports coal, manure, herring, and paving stones (from Sweden) Pop 20,500

**Colchester**, a town 12 m. up the Colne, Essex, England, 51 m by rail N.E. of London, oysters, and boot and shoe making Pop 38,351

**Colmar**, a town of Alsace-Lorraine, Germany, 42 m. S.S.W. of Strasburg, on the Ill, and connected with Rhine and Rhone Canal, manufactures cotton, leather, hosiery, ribbons, and paper Pop. 37,000.

**Colne**, a town of Lancashire, England, 26 m. by rail N. of Manchester, coal near, manufactures calicoes, worsteds, satens, &c, leather, and machinery. Pop 23,000

**Cologne**, the chief town of Rhenish Prussia, on the left bank of the Rhine, 362 m by rail W.S.W. of Berlin, and 302 m N.E. of Paris From its position at the head of the Rhine navigation for sea-going vessels, as a centre of rail and river systems, and near a rich coal and iron field, it has great commercial importance; manufactures cottons and woollens, beet-sugar, chemicals, spirits of wine, eau-de-cologne, tobacco, machinery, &c. Regular communication from London, distance, 382 m Letters, 13 hours; parcels, *via* Belgium, 17 hours British consul Pop 373,000

**Colombia.—Surface and Size**—Colombia is a republic in the north-west corner of South America, including the Isthmus of Panama, and lying between 12° 25' N. and 1° 30' S, and between 68° and 83° W. It is bounded N by the Caribbean Sea and Venezuela, E by Venezuela and Brazil, S by Ecuador, and W by the Pacific From Pasto in the S.W. corner the Cordilleran ranges spread out like the ribs of a half-open fan Flanking the Pacific coast the Cordillera de Chocó is low, and the valley on its E. side is drained S to the Pacific by the San Juan R, and N to the Atlantic by the Atrato Here the rainfall is exceedingly heavy, and the mountains are covered by dense forest. Both water-ways are navigable, the San Juan for 150 m; and along this route it has been proposed to carry a canal from ocean to ocean. The main ranges are the Western, Central, and Eastern, Cordillera, the intervening valleys being drained by the Cauca and Magdalena Rivers, which unite before reaching the sea The former is rapid, but partly navigable, while the latter, flowing for a large part of its course through low swampy country, is navigable as far as Honda These valleys are richly wooded and produce rubber, while coffee, cacao, tobacco, and maize are cultivated The great plains, or llanos, of the E are drained by the head-waters of the Orinoco The climate of Colombia varies greatly, ranging from the tropical coast lands to arctic conditions above the snow-line There is a rainy season from October to December, while the summer or dry season lasts from December to February Between the two, climatic conditions vary with position. Most of the inhabitants live on the plateaux, which are generally well watered but treeless prairies. The chief are those of Antioquia and Bogotá, on the latter of which stands the capital Bogotá, 8694 ft above the level of the sea The extreme length from N to S is about 950 m, and the width across the compact southern portion 640, but as the N and N.W. are narrowed and straggling, the area is only about 517,000 m.

*Government, &c.*—The government is by a president, with a Congress consisting of a Senate and a House of Representatives. There are about 500 m. of railway, of which the chief lines are the Colon-Panama, the Savanilla (Puerto Colombia)-Barranquilla, the Puerto-Berrio, the Bogotá-Roble, the Cartagena-Magdalena, and the Buenaventura. There are almost no properly constructed roads, and ordinary communication takes place by mule-tracks or by rivers, the Magdalena, which is being cleared and canalised, being navigable for nearly 800 m. (for steamers to La Dorada 590 m. from Barranquilla), and its tributaries for 220 m.

*Productions and Resources*—Besides the products already mentioned the lower levels yield rice, sugar-cane, bananas, indigo, resins, rubber, copaliba, cocoa, vegetables, ivory, dye-woods, and medicinal plants. In the more temperate zone, 3000 to 8500 ft. above the level of the sea, are found the cinchona tree, coffee, and figs, while above that wheat, other grains, and potatoes, are cultivated, it being possible to raise two or three crops in one year. On the llanos of the E. cattle are reared. The country is rich in minerals, which are not worked to the extent they might be, owing to the badness of the roads and their being impassable for traffic during the wet season. Gold is found on the Antioquia plateau, coal, iron, and salt on that of Bogotá, and other minerals are copper, lead, platinum, zinc, antimony, sulphur, cinnabar, rock-salt, arsenic, marble, lime, gypsum, petroleum, and several varieties of gems. There are manufactures of pig-iron (Bogotá), rails, castings, sugar, coarse sheeting, candles, and soap. Panama hats are well-known. The position of the Republic at a point where the Atlantic and Pacific approach so closely, and with a coast line of some 1500 m. on each of these oceans, is one of enormous commercial importance—in importance that would be greatly increased were the Panama canal to become an actuality—but it has never been taken advantage of. Even as it is there is a very large transit trade across the Isthmus. The chief imports are black cashmeres for mantillas, light woollen shawls, sewing silks, boots and shoes, ready-made clothes, hats, machinery, canned goods, and matches, and with push a better trade might be done in umbrellas, silk handkerchiefs, pins, needles, other small wares, Sheffield axes and machetes, buttons, saddle leather, Dundee and Halifax carpets and coffee bags, white calicoes, prints, grey shirtings and drills, coloured cotton trouserings and shirtings, and woollen, linen, and jute, goods. Great good has been already accomplished for British trade by the employment of travellers, and travellers would do well to carry more samples and samples of complete articles. Preference is often given to British goods owing to the superior quality.

but attention requires to be paid to Colombian taste in colours and designs. Attention to these points has enabled light woollen shawls of German make to beat similar articles from Paisley out of the market in the meantime, and this has also been the case with Italian cotton trousering. British grey shirting has, however, beaten the American article owing to willingness on the part of Manchester dealers to meet the wants of customers. In sewing silks the bobbin is weighed along with the silk, and the French product is accordingly sent, not on bobbins but wound on a double card which opens out and goes over an old bobbin when required. For import the card weighs much less, of course, than the wooden reel. Cases, too, pay the same duty as the goods they contain, and French and German cases, being of a strong light wood, can be made thinner and much lighter than the British. Catalogues should always be in Spanish. The chief exports to the United Kingdom are coffee, cocoa, raw hides, raw cotton, mahogany and other furniture woods, drugs, and caoutchouc; and to Cuba there is an export of cattle. There is also export of other products mentioned, coffee amounting to about one-third of the whole. Of a total trade of about £8,000,000 about one-third is with the United Kingdom. There is a British consul at Panama, and vice-consuls at all the important places. Postage of letters, 2½d. per half-oz., postcards, 1d., telegrams to Panama, 5s. a word, to Buenaventura, 5s. 6d., to other places, 5s. 9d., mails from London every fortnight.

*Money, &c.*—The gold peso or dollar is nominally worth 4s, but there is a forced paper currency. The metric system is in use, but in ordinary commerce there are used the Colombian pound = 1 102 lbs avoirdupois, and its multiples the arroba (25), the quintal (100), and carga (250); while the vara = 80 centimetres, is a common measure of length. The Colombian flag consists of three vertical bars, yellow next the staff, blue in the centre, and red on the outside. On the blue bar is a yellow-margined shield with a cross red bar and an emblematic design. Pop. about 4,000,000, including about 180,000 uncivilised Indians.

Colombo, the chief town of Ceylon, on the W. side of the island, harbour takes largest vessels afloat, but loading and unloading is done by lighters, regular port of call for Australian, China, and Calcutta steamers. Imports coal, manufactured goods, hardware, machinery, rails, &c., live stock, and rice. Exports tea, coffee, cinchona, pearls, bark, cinnamon, coir, plumbago, essential oils, ivory, and fancy woods. Regular communication from London, Liverpool, and Southampton. Distance from London, 6795 m., from Liverpool, 6720; Glasgow, 6830, Tuticorin, 150, Bombay, 900; Aden, 2100, Madras, 614, Calcutta

1240, Rangoon, 1270; Penang, 1280, Singapore, 1570, and Albany, 3370 Letters, 16 days, parcels, 23 Pop 158,000

Colon, or Aspinwall, a seaport of Panama, on the N side of the Isthmus, the terminus of the Panama Railway, and the intended Caribbean Sea terminus of the Panama Canal; depth at wharves 25 to 30 ft. Imports general goods; exports mahogany, cedar wood, mother-of-pearl, fustic, hides, and Pacific cargoes, consisting of pearls, silks, tea, coffee, indigo, cochineal, silver and copper ore, cocoa, cotton, Panama hats, jewellery, cinchona bark, &c. Regular communication from London and Southampton. Distance from Liverpool, 4530 m, Kingston, Jamaica, 553; St Thomas, West Indies, 1020, New York, 1985. Letters, 19 days British vice-consul. Pop about 7000

Colorado, a west central state of the United States, on both sides of the Rocky Mountains, which here, in the Sierra Blanca, attain a height of 14,454 ft. Much will be done for the soil by systematic irrigation. Great mineral deposits of gold, silver, lead, iron, coal, copper, and petroleum, cover all the mountain and western part of the state. The mountains are crossed in several places by railways (part of systems from St Louis by Kansas and Denver to the Central Pacific Railway) that are triumphs of engineering skill, and traverse passes over 11,500 ft. above sea-level. Iron and steel rails are manufactured. Area, 103,925 m Pop 540,000

Columbia River, or Oregon, rises in British Columbia in the Rocky Mountains, and flows S W, mostly through United States territory, to the Pacific. The length being about 1400 m, it is the longest river on the W side of the continent except the Yukon, estuary 35 m long, and 3 to 7 wide, bar, at present dredged to 23 ft, is to have channel made still deeper. By steamers and intermediate railways goods can be conveyed a distance of 500 m up. The river abounds with salmon, and there are many canning establishments near the mouth.

Columbus, the chief town of Ohio, United States, 116 m by rail N E of Cincinnati, coal and iron fields; important railway centre, with manufacture of railway plant. Pop 126,000

Como, a town at the S W extremity of Lake Como, Italy, 30 m. by rail N of Milan. Orange groves and olives, manufactures of silk, satin, gloves, and soap. Pop 39,000

Concord, a town in New Hampshire, United States, on Merrimac R, 73 m by rail N W. of Boston, with celebrated quarries of white granite, and manufactures of cottons, woollens, wooden goods, and organs. Pop 20,000

Completon, town of Cheshire, England, 26 m S of Manchester, on the Macclesfield Canal; coalfields in the neighbourhood; manufactures silk, twilling, and fustian. Pop 10,706

Congo Independent State, comprises prac-

tically the basin of the R Congo, in the heart of Africa, covering an area estimated at 900,000 m. It is bounded N by the French Congo and Soudan, E by British and German E Africa, S by Rhodesia and Angola, and W. by the Atlantic Ocean. The river itself forms a part of the north-western boundary. In respect of trade and navigation the Congo may be divided into three parts: the lower region, extending from the mouth 110 m to the first rapids at Matadi, which is navigable by steamers drawing 18 ft, the middle region, from Vivi to Stanley Pool, 235 m, of which 70 m. are navigable by small steamers or iron whale-boats, the upper region, from Stanley Pool (Leopoldville) to Stanley Falls, 1000 m, navigable for steamers drawing not more than 4 ft. A railway keeping at a distance of 20 m S of the river, runs from Matadi to Stanley Pool, about 250 m. A local railway being constructed in Mayumbe is open for 20 m. Many other lines are being constructed in the upper Congo region. The navigable portions of the river and its tributaries extend to over 5500 m. The length of the Congo, from its main reservoir in Lake Bangweolo, is estimated at about 3000 m, and its drainage area at about 1,300,000. The climate of this vast region is tropical—the equator crossing its northern half—and the temperature averages from 78° to 82° Fahr. Tropical fruits abound, and the products include ivory, rubber, palm-oil, palm kernels, gums, beeswax, coffee, tobacco, maize, hull rice, sorghum, and camwood. There are no import duties, and only small duties for revenue purposes are levied on exports, the chief of these being ivory, rubber, palm oil and kernels, coffee, and copal. The state is governed by an administration at Brussels, of which the king of the Belgians is the head. Of a special import of about £900,000, nearly one-fifth comes from Britain, and of a special export of about £1,500,000, about £10,000 goes to Britain. Money, weights, and measures as in Belgium. Letters, 2½d per half-oz, postcards, 1d, mails from London every fortnight, letters, about 26 days. The flag of the Congo Independent State is blue, with a yellow five-pointed star in the centre. British vice-consul at Bomba. Pop estimated at 30,000,000

Connecticut, one of the New England States in N.E. of the United States. Tobacco, iron ore, and building stone, manufactures of machines and implements of every description for farm and household use and employment in manufactures. Area, 4990 m. Pop 908,500

Constantinople, the capital of the Ottoman Empire, on the Bosphorus, is divided into two parts by the Golden Horn, a creek 1½ m long and ½ m wide at its mouth, deep enough to accommodate the largest vessels, and forming a safe and commodious harbour with good quays, three graving docks, from 390 to 505 ft. and up

to 35 ft. deep. Manufactures unimportant. Imports coal and general goods of all kinds, and exports a small amount of grain, canary seed, linseed, wool, mohair, skins, attar of roses, and carpets. Of a total trade of about 8,000,000 tons, Britain has about 55 per cent., as against over 75 per cent. ten years ago. Regular communication from London, Liverpool, Hull, Newcastle. Distance from London 3100 m. (rail, &c., 2032); Liverpool, 3920; Glasgow, 3125; Odessa, 340; from Salonica, by sea, 330. Letters, 3½ days; parcels, 18½ by Gibraltar, 9 by Brindisi. Time for noon at Greenwich, 1.55 P.M. British consul. Pop. 1,125,000

Cocktown, a town on the E. coast of Queensland, 1050 m. N.W. of Brisbane, and 280 N.N.W. of Townsville, with a railway (67 m. now open), 120 m., to the Palmer gold-fields. In the neighbourhood sugar-cane, pine-apples, coconuts, coal, gold, and tin; bêche-de-mer and pearl fisheries; harbour up to 18 ft. Distance from Torres Strait, 430 m. Pop. 2000

Copenhagen, the capital of Denmark, on the eastern shore of Zealand, on The Sound, a branch of which, dividing the island of Amager, forms the harbour. At the entrance there is a depth of 25½ ft.; the inner harbour has 17 ft. to 25½ ft., while the free port outside customs territory has up to 30 ft.; grain elevators; three graving docks, woollen factories and spinning mills, engineering, tanneries, making of sail-cloth and manufacture of porcelain. Imports coal, iron, machinery, manufactured goods, timber, tar, grain, exports fruits, feeding stuffs, provisions, yarn, paper; dyes and colours, &c.; horses, sheep, cattle, wool, meat, butter, cheese, pork, and bacon; of the foreign tonnage about 19 per cent. is British. Time for 12 noon at London, 12.50 P.M. Regular communication from Hull, Leith, the Tyne, and Manchester. Distance from London, 715 m. (rail, &c., 880); Liverpool, 1068; Leith, 616; Hull, 621. Letters, 3½ hours; parcels, ¼ Holland, 3 days. British consul. Pop. 378,500.

Coquimbo, or La Serena, a town and a province of Chile, the town near the mouth of the Coquimbo R.; loading and unloading has to be done by lighters and small craft. Imports coal, textiles, and machinery; exports copper in ore, ingots, and bars; manganese ore, algarroilla seed (for tanning), and chinchilla skins; of a total trade of 1½ million tons, about 45 per cent. are British bottoms; of an export trade of nearly £700,000, about two-thirds go to Britain and its dependencies; and of an import of over £200,000, nearly half comes from Britain and its dependencies. Distance from London, 9940 m.; from Liverpool, 8965. Letters, 38 days. British consul. Area of province, 12,673 m. Pop. 161,000; pop. of town, 8000

Cordoba, a town and province of the Argentine Republic, the former 210 m. W. of Santa

Fé. Province produces cattle, wheat, linseed, maize, limestone, timber, horns, bones, hides, and tallow; has mines of silver and lead, copper, gold, manganese, and wolfram; industries—making of carbide, vermicelli, soap, candles, boots and shoes, paper, pasteboard, and starch. British vice-consul. Area of province, 62,160 m. Pop. 400,000; pop. of town, 65,000.

Cordoba, a town and a province of S Spain; coal, silver, and lead; British woollens might find a market if pressed. British vice-consul. Area of province, 5190 m. Pop. 444,000; pop. of town, 57,000

Corea, or Korea, a peninsular kingdom on the E. coast of Asia, between the Yellow Sea and the Sea of Japan. It lies between 34° and 43° N. and between 124½° and 130½° E., and the land boundary is formed by China. Area, probably about 82,000 m. It is very mountainous, being traversed from N to S by a range which rises to a height of over 8000 ft. Transport in the interior is by pack-horses, oxen, and porters. Several short railways have been made. The kingdom is subject to China, but Japan looks on it with watchful care, as is natural, considering that the bulk of the shipping engaged in the Korean trade is Japanese, and that a large portion of the foreign trade passes through Japan. The climate is generally cool and bracing. The principal industry is agriculture, but the methods of cultivation are exceedingly primitive. There is some whale-fishing. Gold is extensively worked by foreign companies under concessions, and coal, copper, and iron are found. Imports cotton shirtings (mostly British), muslins, sheetings (British and Japanese), piece goods and yarn (mostly Japanese), drills (mostly British), woollen goods (mostly British), grass-cloth, bags, ropes, dyes, matches, paraffin (American and Japanese), machinery, mining plant, railway plant, silks, salt, sugar, and timber; exports, rice, beans, hides, ginseng, gold, wheat, copper, bêche-de-mer, fish manure, paper, and seaweed. The unit is a silver dollar, but accounts are kept in the Japanese yen, nominally of the same value as the dollar. There is a British diplomatic representative at the capital Seoul, who acts as consul-general, and there is a vice-consul at Chemulpo. Letters, 2½ d. per half-oz.; postcards, 1d.; telegrams, Fusan, Seoul, and Chemulpo, 6s. 2d. to 7s. 9d. a word, according to route; other places, 6s. 5d. to 8s., according to route. Pop. estimated at 8 to 12 millions

Corfu, a seaport on the E. coast of an island of the same name, the most northerly and largest of the Ionian Archipelago. Port has a good harbour between the island of Vido and the town, with a depth of water up to 11 fathoms, loading and unloading by lighters. Chief imports from the United Kingdom, coal, iron and other metals; Lancashire and York-

shire textiles; handiwork, salted and dried fish, earthenware, hides, indigo, and provisions, exports wine (mostly to Germany, Austria, Italy, and France), olive-oil (Rumania, Italy, and Britain), soap, hides, and valances. Of a trade of over £2,000,000, about one third only is carried in British bottoms, but little of it direct. Goods require to be re-export and taking British travellers are never seen. Of an export of about £200,000, Britain takes one ninth, and of an import of £126,000 it sends one-eighth. Distance from London, 2,157; Liverpool, 2,510; Glasgow, 2,627. Letters, 3½ days. British consular Area of island, 130 m. Pop 125,000; pop of town, 18,000.

**Corinth** a town of Greece, on the rocky isthmus, 3½ m. wide and 262 ft. high, connecting Morea with the mainland. It is thus advantageously situated for trade between the Egean and the Adriatic, and about 1½ m. E.N.E. is the western end of the Corinth Canal through the Isthmus. The canal is about 1 m. long, 69 ft. wide at bottom, 80 ft. wide at surface, and 26½ ft. deep. It was formed between 1881 and 1893 at a cost of about £1,000,000, and reduces the distance of the voyage from sea to sea by 175 m. At its N.W. end is the new town of Porcidonin, and at the S.E. end Isthmia. Corinth exports currants, wheat, oil, honey, and wax. Pop 3000.

**Corinto**, principal seaport of Nicaragua, on Pacific, 22 ft. on bar at low water; calling place for Pacific mail steamers. British consular agent.

**Cork** (including Queenstown), a seaport in the county of the same name, on the S coast of Ireland, in Munster, on the R. Lee 15 m from the sea, and 166 m by rail S.W. of Dublin, large harbour, with 23 ft. at low water of spring tides; depth at quays, 20 ft.; but the channel has a depth of only 14 ft. at low water. Queenstown is a port of call for Atlantic steamers landing and receiving mails and passengers. Imports and exports general goods. Distance from Glasgow, 347 m.; Liverpool, 255. The county, the largest in Ireland, does not call for notice. Area, 1,838,921 acres. Pop 404,611; pop of town, 76,122.

**Cornwall**, a county at the S.W. extremity of England, between the Bristol and English channels, coast has important natural harbours of Falmouth Bay and Plymouth Sound. Mineral wealth considerable—tin, copper, granite, arsenic, and china-clay; richest tin mines at Redruth and Camborne. There are important herring, pilchard, and mackerel fisheries along the coast, and in Penzance district many market-gardens for supplying early fruit and vegetables, the climate being mild, though damp. Area, 868,208 acres. Pop 322,957.

**Corrientes**, a province of the Argentine Republic, with great forests of quebracho. Area, 32,580 m. Pop 277,000.

**Cornica**, a large French island in the Mediterranean. The interior is mountainous with an extreme height of nearly 6000 ft. The soil is sterile but agriculture is backward, and wheat, flour, and hay have to be imported. Fishing and cattle-rearing are the chief industries. The external trade is almost wholly with France. Area, 3377 m. Pop 296,000.

**Corunna**, a seaport on a bay of the same name at the N.W. corner of Spain; safe and well sheltered harbour, takes vessels up to 22 ft. draught. Imports coal, raw hides, machinery (mostly German), metals (iron, tinplates, &c., mostly from United Kingdom), cement (German and Belgian), timber, salt-fish (mostly Norway), maize, coffee, cocoa, and petroleum. exports cattle, onions, tinned provisions, ham and bacon, chocolate, and sardine oil, but if plans now in contemplation be carried out, and the port become the shipping place for the great mineral wealth of Galicia and Leon, Corunna will become a place of very considerable importance. American and German goods sell better than British because the purchaser requires a cheaper (though inferior) article, and longer credit. Regular communication from Liverpool and Southampton. Distance from Santander, 230 m. British consul. Pop 10,500.

**Costa Rica**, a republic of Central America, between Nicaragua and Panama, and lying between 6° and 12° N. and between 82° and 86° W. The area is 23,000 m, the Caribbean Sea coast line over 200 m, and the Pacific coast line nearly 300 m. Towards the S. there is an inter-oceanic railway from Limon on the E by San José to Tivives on the Pacific. The country is generally mountainous in the interior, with several volcanoes rising to a height of some 11,500 ft. On the Atlantic side are dense forests, but on the Pacific slope more commonly rich savannahs. The climate at ordinary elevations is mild. Almost anything can be grown in the fertile soil, but the principal products are coffee, bananas, mahogany, cedar, rose-wood, dye-woods, and cacao. The production of the last is increasing rapidly; the coffee goes mostly to the United Kingdom and the bananas to the United States. The bulk of the trade is with the United States (about 46 per cent.), Britain coming next with about 22 per cent, and then Germany with 13. Of a total of about 700,000 tons, entered and cleared, some three-sevenths were British bottoms. British trade might benefit if merchants were more willing to pack goods to suit the requirements of customs' tariff and regulations, duty being payable on the total weight of packages. Gold is found in several districts and mined, but plant and machinery are of small capacity. Silver, copper, and other metals also exist. Imports cottons, iron (wrought and unwrought), ma-

chinery, woollens, worsteds, and sacks The standard is gold with a gold colon, or peso, worth 4s. The metric system is established by law, but the old Spanish weights and measures (*see* Spain) are still much used Postage from the United Kingdom, 2½d, postcards, 1d, parcels, not over 3 lbs, 2s 4d, between 3 and 7, 3s 10d, between 7 and 11, 5s 6d, telegrams, 4s. 2d a word, mail from London every ten days or oftener There is a British consul at San José. Pop 310,000

Côte-d'Or, a department, district, and mountain range, of central E France, between the upper Seine and the Saône, noted for its Burgundy wines—Beaune, &c Area of department, 3392 m. Pop 362,000

Cottbus, or Kottbus, a town in Brandenburg, Prussia, on the Spree, 71 m by rail S E of Berlin Manufactures carpets, woollen cloth, linens, jute fabrics, and leather Pop 39,500

Courtrai, a town of Flanders, Belgium, on the Lys, near Tourcoing, 6 m from the French frontier Manufactures linen, table-damask, cottons, and lace. Pop 34,000

Coventry, a town in the N of Warwickshire, England, 18½ m E S E. of Birmingham. Manufactures watches, ribbons, cycles, elastic web, and art works in metal, there is also silk dyeing Pop 69,877

Cracow, or Krakau, a town in Galicia, Austria-Hungary, at the head of the navigation of the Vistula, 260 m by rail N E of Vienna. Manufactures of chemicals, cloth, agricultural implements, and leather Pop 91,500

Crete, an island in the eastern Mediterranean, 60 m S of Cape Malea in Greece, an autonomous state ruled by a High Commissioner under the protection of Great Britain, Russia, France, and Italy, with Turkey as the suzerain power The island is 160 m long, from 6 to 35 m broad, and has an area of 3326 m It is mountainous, especially in the W, and rises in Mount Ida, near the centre, to 8050 ft The coast line, deeply indented in the N, affords several good harbours, including Suda Bay, one of the finest anchorages in the Mediterranean The climate is excellent, rainfall 27 in. Chief productions are olive-oil—forming half the export, but used also largely in the manufacture of soap—wine (of poor quality), raisins, oranges, lemons, carob-beans, chestnuts, valonea, and silk Wool also is exported, and sponges are found on the coast Commerce is mainly with Greece and Turkey British consul-general. Pop 309,500

Creusot, or Le Creusot, a town of the department of Saône-et-Loire, 236 m S S E of Paris, in the midst of a rich coal and iron district, with great iron works, which turn out steel and iron rails, pig-iron, engines, cannon, &c. Pop 31,000

Crewre, a town of Cheshire, England, 43 m. S E. of Liverpool, and 158 m N W of London,

a great railway junction with works of London and North-Western Railway. Pop. 42,075

Crimea, a peninsula of southern Russia, between the Sea of Azov and the Black Sea, connected with the mainland by the Isthmus of Perekop, which is 5½ m wide at its narrowest part, and across which is a canal The Crimea is 205 m. long from E to W, 120 from N to S, and has an area of about 10,000 m. Its northern part is bleak and level, being a continuation of the South Russian steppe; while the S E being a prolongation of the Caucasus, is mountainous, but has a good climate and produces olives, figs, vines, &c Pop about 250,000

Crinan Canal, 9 m long, across the neck at the N end of the peninsula of Kintyre, Scotland, depth, 9½ ft., breadth, 24 ft., fifteen locks 94 ft long

Croatia-Slavonia, a south-western province of Austria-Hungary, between the Drave and Save, and extending westward to the Adriatic. The mountainous and hilly districts have forests of pine, oak, beech, and elm, and there are coal, iron, zinc, lead, and copper Area, 16,773 Pop 2,397,500

Cronstadt, a Russian seaport on the small island of Kotlin, in the Gulf of Finland, opposite the mouth of the Neva, and 20 m W of St Petersburg, of which it is the outport, and with which it is connected by a ship canal, 16 m long, 207 ft. wide, and 22 ft. deep Ice-bound in winter Chief Russian naval station Imports coal, iron, coke, patent fuel, cement, bricks, exports deals, battens, lath-wood, putreps, pulp-wood, and other timber Regular communication from London Distance from London, 1383 m, Hull, 1289, Lenth, 1281. British vice-consul. Pop 60,000

Cuba, the largest and most westerly of the West Indian Islands, an independent state, but meanwhile in military occupation of United States, is about 750 m long, from 20 to 120 broad, and has an area of about 36,000 It lies between 19° 35' and 23° 10' N, and between 74° and 85° W Of a coast line of about 2000 m, two-thirds are useless owing to reefs and shoals The surface is mountainous in the S, rising to about 8000 ft., with steep slopes, but sinking more gradually to the N. The climate is tropical, the annual mean on the coast being about 80° Fahr, and the rainfall varying from 40 to 60 in. Chief products, sugar cane, tobacco, coffee, bananas, maize, oranges, and pine-apples—the tobacco is particularly famous. There are in the S E great forests of mahogany, ebony, caju and other oil-producing trees, fibre palms, dye-woods, gums, and resins; the chief minerals are iron, manganese, copper, silver-lead, mercury, zinc, coal, asphalt, and gold, but only the first three are meanwhile worked for commercial purposes. Roads are few and bad, but railways run from Havana through the tobacco and sugar districts. O.

the whole cigar production, valued at nearly £2,500,000, Britain takes about £1,000,000; and Cuba receives from Great Britain imports to about double that amount—food products and liquors, cottons, linens, and woollens, metals, tools and implements, drugs and chemicals, glass and earthenware, &c. From other countries the island imports textiles, metals, machinery, drugs and chemicals, leather, wood manufactures, glass and earthenware, paper, and provisions. The exports are cigars, cigarettes, leaf tobacco (mostly to United States); oranges, cocoa-nuts, bananas, and cacao (all last four to United States), honey, wax, and hides (all three mostly to Germany, the United States, and France), and cabinet woods (to the United States, United Kingdom, and Germany). The great bulk of the trade is with the United States—about 65 per cent, Great Britain and British Possessions about, 14, Germany 8, and Spain 8, but a large part of the German import is rice sent from British Possessions, *via* Hamburg. Of a total tonnage, entered and cleared, of over 4,000,000, about one-eighth is British. Owing to cheapness, American machinery has almost driven British out of the market, and such points are worthy of careful consideration by British manufacturers and merchants, as the development of the island will probably now proceed with leaps and bounds. There will, therefore, in all likelihood by-and-by be a brisk demand for sugar machinery, agricultural machinery, pumping machinery for irrigation, rails and railway plant, industrial machinery and labour-saving apparatus, steel girders and corrugated iron for roofs, and electrical plant of all kinds. American competition, keen in itself, has the advantage of nearness of market and speed, but if large trading companies were to be formed, combining retail and wholesale business in all branches of imported goods and the purchase of local produce for export, that difficulty might be obviated. Such companies would be sufficiently strong to keep large and varied stocks selected with watchful care in anticipation of the market. There is a great lack of British houses, and especially of retail establishments. A bale of tobacco=110 lbs. British consul-general at Havana Pop 1,573,000.

Cumberland, a border county in the N W of England, with a mountainous surface reaching 3161 ft. Coal, iron ore, lead, gypsum, plumbago, and zinc, the first two important, with blast-furnaces, cotton, woollen, linen, and other manufactures. Area, 970,161 acres. Pop 266,921.

Curaçao, or Curaçoa, an island belonging to Holland, off the N. coast of Venezuela, 36 m long, 8 broad, and with an area of 210. Produces salt, phosphates, sugar, tobacco, cotton, maize, cacao, and the oranges from the peel of which Holland Curaçao liqueur is made. Curaçao Port imports coal, lumber, petroleum, and general goods; exports salt, phosphate of lime, and orange peel. Regular communication from Liverpool, mail made up in London twice a week. British consul Pop 30,000.

Cuxhaven, a town on the left bank of the Elbe at its mouth, serving as the outport of Hamburg for very large vessels and when the river is frozen, and as a harbour of refuge; depth of water at entrance and at quays, 26½ ft. British vice-consul Pop 7000.

Cyprus, an island (occupied and administered by Britain though nominally belonging to Turkey, a portion of the revenue amounting to £92,800 being paid to the Sultan), in the E end of the Mediterranean, about 50 m off the coast of Syria, 40 from that of Asia Minor, 1000 E of Malta, and 200 from Port Said. It is about 140 m long, from 40 to 60 wide, and has an area of 3584. There is a range of mountains in the N. reaching a height of 3140 ft, and another in the S reaching a height of over 6400 ft, while between these is the fertile plain of the Mesaorea. Roads have been made since British occupation. Much might be accomplished by systematic irrigation. The climate is good (except in low coast districts) with a rainfall of from 13 to 25 in, a summer temperature of 100° Fahr, and a winter temperature of 40°. Produces pine, wheat, barley, oats, vetches, cotton, carobs, olives, vines, silk, salt, gypsum, terra umbra, and sponges. Imports cotton yarn and piece goods, woollens, silk manufactures, leather, timber, sugar, tobacco, flour, coffee, dried fish, olive-oil, rice, provisions, haberdashery and millinery, coal, iron and steel, silk-worm eggs, sacks, empty casks, drugs and medicines, oils and colours, indigo, earthenware and glass ware, petroleum, and soap, exports carobs, wheat, barley, and oats, wine, animals, silk cocoons, hides and skins, cheese, raisins, oranges, lemons, and other fruits, vegetables, tobacco, raw cotton, wool, linseed, sponges, sumach, gypsum, and terra umbra. Of an import of over £300,000, Britain and British possessions send about a quarter, Turkey, Austria, and Egypt, coming next, while of an export of over £300,000, Britain and its colonies take over one-third. Regular communication from Liverpool to Larnaca. Distance to Beyrout, 108 m. Letters, 9 days, parcels, 23. Pop 237,000.

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Dacca, a town and a district in Bengal, India, the town 160 m N E of Calcutta. Centre of jute trade, muslins and coarse cotton cloth, the province produces sugar-cane, oil-seeds, jute, and cotton. Area of province, 2797 m Pop 2,413,000, pop of town, 90,600

Dahomey, negro state in W. Africa, in the French sphere. The surface fairly flat, with produce of timber, maize, bananas, ground nuts, sugar-cane, coffee, and cotton. Chief imports cotton goods and yarn, tobacco, liquors, groceries, building materials, and salt. Of a total value of about £800,000, the United Kingdom, directly and through Lagos, has about 12 per cent. The tobacco from America passes largely through the United Kingdom, while the great bulk of the liquors comes from Germany and France, iron work for building comes mostly from the United Kingdom, as do also the salt, cotton goods and yarn, pottery, small machinery, soap, perfumery, &c. In cottons there is a ready sale for the better qualities, as the natives prefer a strong article with a certain amount of warmth. The great articles of export are palm-oil, mostly to the United Kingdom and to France, and palm-kernels to Germany (both *via* Lagos), but there is also export of animals, kola-nuts, rubber, cocor-nuts, copra, dried fish, and ground-nuts, the bulk of which goes to Lagos. Of a total export of over £500,000, about 37 per cent. went to Britain and Lagos. Of a total tonnage, entered and cleared, of 800,000 tons, about three-eighths were in British bottoms. Mails from London every fortnight, to London every month; parcels, not over 3 lbs, 3s; between 3 and 7, 3s 6d, between 7 and 11 lbs, 4s; telegrams, 6s 3d a word. British consul. Area about 60,000 m Pop 1,000,000

Dakota, North, and South, two north-central states of the United States, extending south from the Canadian border at Manitoba. Surface undulating prairie land. Magnificent crops of wheat in North Dakota, in South Dakota maize and flax grown for seed. In the east-centre irrigation is required. Lignite is found in a number of places, and in the S W, in the Black Hill district, gold, silver, tin, and nickel. Area of North Dakota, 70,195 m Pop 319,500. Area of South Dakota, 76,850 m Pop 402,000

Dalbeattie, a town in Kirkcudbright, Scotland, 4½ m by rail S E of Castle-Douglas, with extensive granite quarries of Craignair in neighbourhood. Pop 3469

Dallas, a city in Texas, United States, railway centre with good agricultural district, flour-mills and manufactures of woollens. Pop 43,000

Dalmatia, a province of Austria, stretching down the N.E. of the Adriatic, mountainous, mostly woodland and pasture land. The coast fisheries are important, and there are small exports of wine, oil, hides, wax, fruit, and honey. Area, 1040 m Pop 594,000

Dalmellington, a town in Ayrshire, Scotland, 15½ m by rail S E of Ayr, with coal and iron works. Pop 1118.

Dalny, a commercial port established by Russia, on the E side of the Liao-tung Peninsula of Manchuria, China, on the branch railway from the Siberian Railway at Kaidalovo by Harbin to Port Arthur. The harbour is free from ice, and is navigable at low water to vessels up to 30 ft.; tidal rise and fall about 12 ft.

Dalry, a town in Ayrshire, Scotland, 16 m by rail S of Greenock, coal, iron works, and woollens and workshops. Pop 5316

Dalton-in-Furness, a town in Lancashire, England, 4 m by rail N N E. of Barrow, with iron works and iron ore. Pop 13,020

Damascus, the chief town of Syria, Turkey, in an extensive plain. The place has importance, and assurance of a prosperous future through being the storehouse of one of the richest grain-producing districts of the empire—the Hauran, the Jebel Druse, and the Gaza of Ajluna. It is a manufacturing and industrial centre, surrounded by land of very great fertility, and producing, thanks to a hot sun and copious irrigation from the Barada R., every kind of fruit and vegetable in great profusion. There is railway communication with Haifa (140 m) through the great wheat district of Hauran to S, with Beyrout (91 m), and a line is being made northward to Homs and Hama (166 m)—both places of importance, and the latter the most important silk-rearing centre in Syria, with an export trade of £750,000. Its natural outlet is, however, Tripoli (59 m). From the Haifa line a branch is being made northward (Hedjaz) to Ain Zerka (125 m), and will be continued to Ma'an (290), and perhaps some day (as is intended) to Mecca (1100). Damascus has industries of hand-loom weaving in silk, cotton, and wool, of metal working, and of mother-of-pearl inlay, the shell used being that of a bivalve found in the Euphrates. The imports are textiles, hardware, petroleum, and general goods. Of the textiles, 60 per cent. are still British, but the quantity is diminishing, as other countries seem better able to supply the cheap, glittering, showy article (this applies to goods of all kinds) that the Damascene demands, to sell at a lower price *cif* complete, and to grant credit. In woollens, the British pieces (60 to 65

yards) are too long, and in iron, Belgium and Sweden seem to be able to compete at lower prices. The exports are grain, flour, apricots, apricot paste and stones, raisins, wool, skins, starch, and carved walnut cabinet work with or without mother-of-pearl inlay. Apricots are very important, and though, owing to the system of irrigation, their taste is flat and insipid compared with that of the European fruit, something might be done with them in the shape of a preserve, and also tinned. Of an import of some £500,000, nearly half comes from the British Empire. British consul. Pop 110,500

Damodar, a right bank tributary of the Hooghly, Bengal, the basins of which and of its chief tributary, the Barakhar, contain the most productive coalfields of India.

Dannemora, a town in Sweden, 70 m. by rail N of Stockholm, with largest and best iron mines in the country. Pop 3000

Danube, the second largest river of Europe, rising in the Black Forest in Germany, and flowing (1760 m) through Austria-Hungary and along the borders of Serbia, Bulgaria, and Roumania, and finally through Roumania, to the Black Sea. The chief mouths are the Kilia, the Sulina, and the St George. The Sulina, which has a depth of never less than 15 ft some 120 m up to Braila, is commercially the most important. The navigation of the Danube is dangerous on account of the narrowness and rapidity of the river near the Iron Gates, at the meeting-place of Hungary, Bulgaria, and Roumania (though this was in 1890-93 much improved by a new channel cut through the rock), and by the shifting of the channel in the course through the Hungarian plain. For sea-going vessels the river is navigable up to Radujevac in Serbia, for smaller river steamers up to Ratisbon, and for barges of 100 tons up to Ulm. There is communication with the Rhine by the Ludwigs Canal, and with the Elbe by the Moldau and Muhl. The Danube has about 100 navigable tributaries. Of 1411 sea-going vessels (1,930,002 tons) that left the river in 1901, 461 (804,304 tons) were British, Greece coming second with 233 (324,965 tons)

Danzig, an important seaport and naval station of Prussia, Germany, on the left bank of the western arm of the Vistula, 4 m up from the Gulf of Danzig on the Baltic, 284 m by rail N E of Berlin. The town is, however, now (1903) being connected with the sea by a new channel, through the dredging, at a cost of some £200,000, of the Schuntenlake, which for a mile and a half will be deepened to 24½ ft in the middle, with a width of 150 yards. The old channel of the Mottlau will be handed over to the German government for the use of the Imperial fleet. The harbour has at present a depth of 22 ft, and the Imperial dock

(large vessels) is available for repairs. The water-way is kept open in winter by a steam ice-breaker. The chief industries are the making of woollens, paper, chemicals, sugar, beer, spirits, machinery, and of amber and ambroid (pressed amber) ornamental articles. The rough amber is worth some £800 a ton. The chief imports are coal and coke, manure and chemicals, petroleum, herrings, salt, and raw iron, and the chief exports beet-sugar, grain and seeds, flour and meal, and timber. The coal, coke, raw iron, herring, tallow, and finer qualities of salt are largely from the United Kingdom, and the coarser qualities of salt from Russia (Crimca). The United Kingdom takes the bulk of the sugar and a fair quantity of the grain and timber. Regular communication from Hull, Tyne, Bristol, Manchester. Distance from London, 990 m; Hull, 895, Lath, 890, Glasgow, 1270; Liverpool, 1310, Carlisle, 1400. Parcels, 3 days. British consul. Pop 141,000

Dar-al-Baida. See Casa Blanca

Dardanelles, a narrow strait 10 m long and one to four broad, between Europe and Asia, and connecting the Sea of Marmora with the Egean. There is a strong current out to the latter sea. No ships of war, other than Turkish, are allowed to pass through without the consent of the Turkish government.

Dar-es-Salaam, the only good harbour on the coast of German East Africa, 40 m S E. of Bagamoyo and Zanzibar; caravan centre. Regular communication from Southampton. Mails from and to London every fortnight. British vice-consul. Pop 13,000

Darjeeling, a tea-producing district (some 9 million lbs) of India, amid the ridges and deep valleys of the lower Himalayas of Bengal. Area, 1164 m. Pop 226,000

Darling, a river of New South Wales, Australia, with a length of 1160 m and a basin of 198,000 m; longest tributary of the Murray, in wet season navigable to Bourke, but in dry season merely a chain of lakes.

Darling Downs, a fine grazing and agricultural district with an area of over 6000 m, along and to the W of the Dividing Range in the south of Queensland, Australia.

Darlington, town in Durham, England, 238 m by rail N by W of London and 45 N by W. of York, iron, steel, worsted, locomotive works of North Eastern Railway. Pop 44,496

Darwen, a town of Lancashire, England, 4 m by rail S of Blackburn. Centre of cotton trade, paper-making and staining, blast-furnaces, and fire-clay. Pop 38,211

Davis Strait, the passage on the N E coast of British North America connecting Baffin Sea with the Atlantic, 180 m across at narrowest part and 400 to 900 fathoms in depth.

Dawson City. See Klondyke

Dayton, a town of Ohio, United States, 58

m. by rail NNE of Cincinnati; railway carriages, agricultural machinery, and cash registers Pop 85,500

**Dearne and Dove Canal**, in West Riding of Yorkshire, England, from Barnsley to Swinton, 14 m., takes barges of  $5\frac{1}{2}$  ft

**Debreczin**, great cattle, grain, and pig, centre in the Hungarian plain, flour-mills, and manufactures of sausages, hams, and tobacco pipes Pop 75,000

**Dede Agatch**, a roadstead on the S. coast of European Turkey, at the end of a branch of the Constantinople-Belgrade railway, 10 m W of the mouth of the Maritza, regular communication from London, money orders exchanged British vice-consul.

**Delagoa Bay**, a large bay—best harbour in South Africa, 78 by 20 m—in Portuguese East Africa The outer bay is separated from the open sea by shifting shoals, but there are channels with 24 ft of water A second bar divides the outer harbour from the inner, which is 1 m by 7, and has inside a depth of 3 to 13 fathoms Mails from and to London every week, letters, 21 days; telegrams, 3s 1d per word

**Delaware**, a river in the NE of the United States, separating New York and New Jersey from Pennsylvania and Delaware Navigable for large ships to Philadelphia, 120 m from sea, and for smaller vessels to Trenton, 155 m

**Delft**, a town of Holland, 9 m by rail N.W. of Rotterdam Still a small manufacture of earthenware, but the so called "Delft" is now mostly made in Great Britain Pop 32,000

**Delhi**, a district and a town in northern India, the former with an area of 1290 m and a pop of 650,000, the latter the chief commercial and industrial town of the Punjab The town is on the right bank of the Jumna 113 m by rail NNW of Agra, and 954 N.W. of Calcutta Centre of wheat trade; gold, silver, and tinsel, work, shawls and fine muslins Parcels, 29 days Pop 209,000

**Demerara**, or Georgetown, the chief town of British Guiana, South America, on the E side of Demerara River Depth of water on bar at entrance to harbour 10 ft at low water, and 19 at high water, of spring tides, dry dock 230 ft long Imports general goods, exports sugar, rum, molasses, gold, and furniture woods, vessels of 15 ft. can get 70 m up the river to Christianburg, and those of less draft 20 m farther Regular communication from London, distance, 4030 m, Liverpool, 3955, Glasgow, 4065, Cardiff, 3850, Barbados, 400 Letters, 14 days; parcels, 14 Pop 54,000

**Denbigh**, a county of North Wales, with coal, fire-clay, and red clay (for terra-cotta), slate, lead, and zinc Area, 423,477 acres Pop 129,935

**Denia**, a port in SE Spain, 45 m NE of Alicante. takes vessels up to 14 ft, but those

of larger size have to anchor in roadstead. Imports general goods, exports large quantities of raisins (mostly to United Kingdom), and also a considerable amount of grapes (mostly to United Kingdom), onions (mostly to Canada and United States), almonds (Canada, United States, and United Kingdom), and oranges (United Kingdom), of a total trade of 300,000 tons, about one-third is British. Distance from London, 1700 m, Liverpool, 1623, Glasgow, 1735, Tyne, 1980, Cardiff, 1520. British vice-consul. Pop 12,000

**Denmark.**—*Surface and Size*—Denmark is a partly mainland, partly insular, kingdom of northern Europe, lying between  $54\frac{1}{2}^{\circ}$  and  $57\frac{1}{2}^{\circ}$  N and between  $8^{\circ}$  and  $12^{\circ} 50' E$  (exclusive of Bornholm, which touches  $15^{\circ} 2'$ ), and bounded NW by the Skager Rack (dividing it from Norway), E and NE by the Cattegat and Sound (separating it from Sweden), S by the Baltic and Germany, and W by the North Sea The mainland part is the peninsula of Jutland, SE of which are the large islands of Zealand and Funen and the smaller Langeland, Laaland, Falster, Moen, &c., while in the Baltic, 90 m W of Moen, is Bornholm The surface of Denmark (except in Bornholm) is an almost unbroken plain, rising to 560 ft in the SE of Jutland, and at some places on the coast sinking so low that dykes are necessary to keep out the sea Both the peninsular and insular portions are deeply indented with fiords (the largest being the Lum Fiord in Jutland), with the result that there is a coast line of about 2500 m On the west side shallows and small islands render navigation dangerous, but the east coast is comparatively safe The climate is insular with an abundant and regular rainfall very favourable to the growth of pasture. The winters are sometimes very severe, and though the prevailing winds throughout the greater part of the year are warm and come from the SW, there are, in early spring, cold and dry winds from the E, and the contact of the SW winds with the cold waters of the Baltic produces fogs all over the country The mean rainfall is about 55 in, and the mean temperature is about  $47^{\circ}$  Fahr The total area (inclusive of the Faroes) is 15,360 m<sup>2</sup>, the length, 200 m, and the breadth, exclusive of Bornholm and the Faroes, 180 m

*Government, &c*—Denmark is a constitutional monarchy, and the Parliament or Rigsdag consists of the Landething or Upper House and the Folkething or Lower House The total population, inclusive of the Faroes, is 2,465,000 For external communication the W coast, as being open and free from ice, would be most suitable, but it is practically useless owing to the shallow sea, and the ports are consequently on the east. For inland communication there are 1810 m of railway (largely belonging to the state), 4213 m. of

main road, and 22,012 m. of district roads. The railways on mainland and islands are connected by steamers and in winter by iceboats.

*Resources and Productions*—Denmark may be said to depend almost entirely on its agriculture and pasture, 10,400 m of surface being available and used in this connection, of which about half is arable, and of the total population half may be taken as engaged in agriculture. The land may be said to be in process of passing into the hands of peasant proprietors, as the law forbids small holdings being united to form larger estates, and encourages the subdivision of landed property. The chief crops are oats, barley, rye, clover, hay, red beet, and fodder. Cows are kept in large numbers for dairy purposes, the manufacture and export of butter (some 1,800,000 cwts.) being the leading industry of the country. By co-operation, and the sending of the milk to central dairies, uniformity of quality is secured, and a greater amount of butter is produced from a given quantity of milk. The profits are divided on the basis of the amount of raw material delivered, after deducting a due proportion of the working expenses of the establishments. One co-operative butter factory, for example, controls over 6000 cows, and in all 1040 establishments are supported by about 150,000 farmers, owning about 858,000 cows. The Danish farmer has no doubt of the financial benefit of co-operation worked on a sound basis. The cream, too, is now soured by the direct action of a pure preparation of bacteria, so that the butter may have the very best taste and flavour, and the certainty of keeping fresh, for a very long period. This new method takes but little labour, and deterioration in the product from one day to another is absolutely prevented. The export of eggs and bacon, these being also productions of value, is managed on similar lines. Careful technical instruction is given in the best methods of milking. Of the whole area of the country about 800 m are under wood, principally in the N and E of Jutland, and in the islands. The timber is mostly beech, that tree flourishing better in Denmark than in any other country of Europe. Over 200 m are occupied by sand dunes, and about 100 m by peat mosses, which are, however, of value for fuel. The lack of minerals prevents any great industrial development, but there are manufactures of pottery, machinery, beet-root sugar, beer, and ale.

*Commerce and Trade*—The total imports of articles intended for home consumption have an annual value of about £22,000,000, and the exports of articles of domestic produce about £16,000,000, of which the imports from the United Kingdom amount to about £4,800,000, and the exports to the United Kingdom to over £14,000,000. The entire import is £29,000,000, and the total export £22,000,000. Great Britain

has the largest share of the foreign trade, 37 per cent. by value and 41 per cent. by weight. The exports sent to this country—butter, bacon, pork, and eggs—are much more valuable than the imports from it, which are, for the most part, raw goods—coal, iron, &c. After the United Kingdom come, in order, Germany, Sweden, the United States, and Russia (the last three with a total trade of from 4 to 5,000,000 pounds); but it may be noted that while the exports to Germany are small compared with those of Great Britain (less than £1,000,000), the imports from it are much more valuable (over £8,500,000). It would be better in many cases if British manufacturers were to deal direct, instead of through a general agent in Hamburg, and if British exporters, and those connected with the export trade, were to see that their trade-marks and designs are properly registered, so that imitation may be prevented. British trade might be greatly improved by push, but meanwhile for every British commercial traveller there are over eleven German ones, and German firms offer and invoice goods to Denmark in local currency, weights, and sizes, duty paid, and delivered at the customer's warehouse, while British firms cannot be induced to adopt this course. The Anglo-Scandinavian Import and Export Association, Harnegade, Copenhagen, is willing to perform all the work of commercial travellers, and the Benedix Bank, Copenhagen, remits sterling to London, for sterling drafts on Copenhagen, less a small charge for draft and commission, thus saving tedious calculations of local currency and exchange. The United Kingdom takes almost the whole of the butter and eggs exported. The principal articles imported into Denmark from Great Britain are coal and fuel, metals (iron, brass, and copper), cotton yarn and fabrics, woollen and worsted yarn and fabrics, machinery, refined sugar, ships and boats, bags and sacks, manufactures of caoutchouc, corn, flour, &c., glass, hardware, jute manufactures, linens, oil-cloth, seeds, and slates, and there is a transit trade in foreign and colonial goods of about £500,000, mostly in caoutchouc, coffee, lard, seeds (flax, linseed, clover, and grass), sugar, and tea. The chief exports to the United Kingdom are butter, bacon, eggs, fish, beef (fresh), pork (salted and fresh), fish-oil, sheep and lambs, barley, raw hides, machinery, paper, unrefined sugar, wool, and woollen rags. The mercantile navy has a tonnage of nearly 400,000. Of 11,000,000 tons, entered and cleared, 6,000,000 were Danish, 2,000,000 Swedish, over 1,000,000 German, and 900,000 British. There are British consuls at Copenhagen and Aarhus, and a number of vice-consuls. Letter postage (including Faroes and Iceland), 2½d per half-oz., post-cards, 1d parcels, *via* Hamburg, not over 3

lbs, 1s 6d ; between 3 and 7, 2s ; between 7 and 11, 2s 6d. ; *vsd* Holland or Belgium, 3d in each case extra , telegrams, 3d. a word , money orders exchanged , two mails from and to London every day

*Money, &c*—The standard is gold, and the unit of account is the krone=1s 1½d., or about 18 kroner=£1 The krone is=100 ore , 90 ore nearly=1s The pund (=100 kvint=1000 ort) is 1 1023 lbs avoirdupois , and the centner=100 pund, is 110 23 lbs avoirdupois ; the grain tonde=3 827 bushels , the oil tonde=28 9189 gallons , the butter tonde=246 9179 avoirdupois ; the coal tonde=4 6775 bushels ; the pot =0 2126 gallons , the viertel=1 7011 gallons , the ship last=2 tons , the alen=2 fod=0 6864 yards , the kubik fod=1 0918 cub ft. , the tondeland=1 36 acres , and the register ton for steamers is taken as 0 89 of each ton of registry The Danish ell is=2 06 ft. , and the Danish mile=4 78 British miles The Danish flag is crimson, with a white St George's cross

Denver, a town in Colorado, United States, on South Platte R., 922 m by rail W. of St. Louis Important mining and commercial centre, iron and steel works, cottons and woollens, flour, United States assaying mint. British vice-consul Pop 134,000

Derby, a county and county town in central England The former, hilly in N and low in S , coal, iron, gypsum, lead, barytes, fire-clay, marble, and fluor spar , manufactures of cotton, silk, worsted, hosiery, lace, and porcelain ; mineral springs The town, 129 m. by rail N N W of London, has blast-furnaces, silk mills, lace, and porcelain Area of shire, 658,876 acres. Pop 620,196 , pop of town, 105,785

Des Moines, important railway and manufacturing centre, Iowa, United States, at junction of Raccoon and Des Moines, which flow to the Mississippi, manufactures railway plant and machinery Pop 62,500

Dessau, chief town of duchy of Anhalt, Germany, near the Elbe, 70 m by rail S W of Berlin , sugar, carpets, woollens, and machinery. Pop 51,000

Detroit, a lake port in Michigan, United States, on Detroit R., between Lake St. Clair and Lake Erie, 284 m by rail from Chicago , river navigable for vessels of largest size, except during four months of winter Iron, machinery, railway plant, flour , and trade in grain, lumber, food-stuffs, &c Pop 286,000

Devonshire, a county, S W England, on Bristol and English Channels, dairy and sheep farming, fruit, pilchard and mackerel fisheries, stone, china, fire, and potter's, clay, copper, tin, lead, manganese, arsenic, barytes, umber, and ochre , manufactures of serges, linens, leather, gloves, and laces , special products, cider, clotted cream, red Devon cattle, and Dartmoor and Exmoor sheep and ponies Area, 1,667,097 acres Pop 660,444

Dewsbury, a town in Yorkshire, England, near R. Calder, 8 m S S W. of Leeds, and 182 m by rail N. by W. of London. Centre of district with coal, iron, and chemical manufactures, makes heavy woollens (blankets, carpets, &c), and shoddy goods Pop 28,050

Diarbekir, a vilayet, with a town of the same name, on the left bank of the Tigris, in Turkey in Asia Agriculture, sheep-rearing, valonea, silk-worms ; copper is worked, and coal and silver are found, but not worked Imports from British Empire—mostly cotton goods and yarn, iron, tin, sheet copper, and indigo—about half of total foreign import of £250,000 ; exports to British Empire—mostly copper, valonea, and mohair—about half of a foreign export of £150,000 A trade might be established in soap, but the article would require to conform to native ideals British vice-consul Area, 13,703 m Pop 471,500

Dieppe, a town in the department of Seine Inférieure, in N France, 38 m by rail N of Rouen , docks taking vessels of 24 ft at high water of neaps, dry dock, 328 ft. , tidal harbour, 36 ft. at high water of ordinary spring tides and 30 ft. at neaps , regular line of cross-channel steamers to Newhaven (75 m, twice daily), regular communication also with Grimsby and Grangemouth, oyster, herring, and mackerel, fishing Imports coal, iron, timber, and general goods ; exports fish, oil-cake, chalk, flints (round, used as balls in cylinders for crushing cement), powdered flint, brandy, wine, fruit, and eggs ; of a total tonnage of over 500,000 tons (exclusive of packets), nearly 300,000 are British bottoms There might be a market for stationery, locks, nuts and screws, garden tools, rubber goods, and cutlery. British vice-consul Pop 23,000

Dijon, the chief town of the department of Côte-d'Or, east central France, 196 m by rail S E of Paris, and on the Canal de Bourgogne. Chief seat of Upper Burgundy wine trade, trade in flowers , manufactures brandy, woollens, and mustard Pop 71,500

Dnieper, an important Russian river, rising in the Valdai hills and flowing southward to the Black Sea, with a course of 1330 m and a basin of 240,000 m It has canal communication with the Vistula, Duna, and Volga Notwithstanding that its navigation is much interrupted by shallows and rapids, and in the upper parts in winter by frost, nearly 3,000,000 tons of grain, timber, hemp, &c , are conveyed along the river and its tributaries every year.

Dniester, a river, rising in Galicia, in Austria-Hungary, and flowing through Russia to the Black Sea, with a course of about 800 m and a basin of 30,000 m Though the navigation is interrupted by falls and rapids, the river forms a great outlet for timber and grain, there being railway communication from Bendery, on the lower part, to Odessa

**Dogger Bank**, a great sand-bank, 170 m long by 65 broad, in the centre of the North Sea, 100 m off the coast of Yorkshire, with a northern extension called the Fisher Bank, depth, 8 to 20 fathoms; Fisher Bank, 30 to 40 fathoms, Silver Pits (sole, &c, 40 to 50 fathoms) separates it from Well Bank to S, 12 to 19 fathoms, about 400,000 tons of fish from it every year.

**Dominica**, one of the British West Indies, in Leeward Islands, mountainous, rising to over 6200 ft, but with fertile valleys; sugar, cacao, limes, maize, and cabinet woods Exports sugar, lime-juice, coffee, cacao Regular communication from London. Mails to and from London every fortnight Letters, 1d per half-oz, postcards, 1d, parcels, not over 3 lbs, 1s, between 3 and 7, 2s, between 7 and 11, 3s, letters, 13½ days; parcels, 14½, telegrams, 4s 2d a word, money orders exchanged Area, 291 m (19 m long, 16 broad) Pop 29,000

**Don**, a river of Yorkshire, England, navigable for boats of 6½ ft to near Sheffield, and connected with the Dearne and Dove, and Stainforth and Keadby canals, the latter leading to Trent

**Don**, a river of Russia, with a course of 1150 m to the Sea of Azov, and a basin of 165,000 m., connected by canal and rail with the Volga, it is an important means of communication between the centre and south of Russia Half a million tons of goods or more pass down every year, and as much sent up Great salmon, herring, and sturgeon fisheries

**Doncaster**, a town on the Don, West Riding of Yorkshire, England, 33 m by rail S of York. Locomotive and carriage works of Great Northern Railway, agricultural implement works Pop 28,924

**Dondo** See Kwanza

**Dorsetshire**, a coast county of S.W England, mostly pastoral, but well-known Purbeck and Portland building stones, marble, and fire, china, and pipe clays Area, 632,272 acres Pop 202,962

**Dortmund**, important town of Westphalia, Prussia, 74 m by rail N E of Cologne, centre of Ruhr coal-basin, iron and steel, mining and nail-making machinery, safes, breweries, &c Pop 143,000

**Doubs**, a river of central east France, forming for 53 of its 270 m part of the Rhone and Rhine Canal The department of the same name is a rich agricultural, fruit, and wine, district, and has rock salt Area of department, 2018 m Pop 299,000

**Dover**, a port in Kent, England, on English Channel, 76 m. by rail E S E of London, and with regular steam communication thrice a day with Calais (25 m) and with Ostend (60 m) The tidal basin is 10 ft. deep at high water of neap tides, and 21 ft at springs, while the new commercial harbour (1902) has a depth at low

water of from 15 to 40 ft (vessels drawing 33 ft can lie at the end of the new Prince of Wales Pier), and encloses an area of 75 acres. As it is 5 m nearer the Hook of Holland than Harwich, 25 nearer Flushing than Queenborough, and slightly nearer Boulogne than Folkestone, it is hoped that the port may become a still more important centre for cross-channel traffic than it is at present, and also that it may become a point of departure, and place of call for trans-Atlantic steamers The great national harbour of refuge will, when completed (it is expected in 1908), enclose an additional area of 610 acres, of which 315 will be beyond the 5 fathom line Pop 41,782 The *Strait of Dover* is the narrow passage between the English Channel and the North Sea, extending from Dungeness to the South Foreland, and from Cape Grisnez to Calais, a distance of 22 m, with a width of 18 to 25 m, and a depth of 6 to 29 fathoms

**Down**, a maritime county in the E of Ulster, Ireland, with linen manufactures Area, 611,927 acres Pop excluding Belfast, 205,889

**Downs**, The, a roadstead off the S E. coast of Kent, England, between the mainland from the N to the S Foreland and the Goodwin Sands, measuring 8 m by 6, and with a depth of 4 to 12 fathoms Safe in all winds except those from S

**Drammen**, a seaport of Norway, 33 m by rail S.W. of Christiania, trade in timber, pitch, wood-pulp, and ice, harbour takes vessels up to 20 ft, kept open in winter by ice-breakers. Regular communication from Humber British vice-consul Pop 23,000

**Dresden**, capital of the kingdom of Saxony, Germany, on both sides of Elbe, 120 m by rail S E of Berlin, 822 rail, &c, from London, fine collection of pictures and other art objects, pianos, sewing-machines, gold and silver work, and chemicals For Dresden china, see Meissen Letters, 25 hours, parcels, 2 days British consul Pop 396,500.

**Droitwich**, a town, with brine springs and salt-works, in Worcestershire, England, 7 m by rail N N E of Worcester, and communicating by canal with the Severn, brine baths for rheumatism Pop 4163

**Drôme**, a department of S E France, drained by the Rhone and Isère; important for silkworms, also wheat and vines Area, 2518 m Pop 297,500

**Drontheim**. See Trondhjem

**Dublin**, the capital of Ireland, on both sides of the R Liffey, at its mouth in Dublin Bay, 63 m W of Holyhead, 138 W of Liverpool, and 203 S S W of Glasgow, depth on bar 15 ft at low water of spring tides, and in tidal harbour from 14 ft at low water to 27 ft. at high water of ordinary spring tides, the Alexandra basin has a depth of 24 ft. at low water, six graving docks, varying from 75 to 408 ft. in

length, and with depth on sill varying from  $6\frac{1}{2}$  to 16 ft.; Dublin Bay is about 6 m. wide and 6 deep, communication with W of Ireland by Grand and Royal Canals (first to lower Shannon and sea, second to upper Shannon), and with all parts by rail, porter, whisky, and poplins. Pop 290,638 The county undulates inland, reaching in the S a height of over 2400 ft., fisheries, dairy-farms, market gardens, granite, limestone, copper, and lead. Area, 226,821 acres Pop excluding borough, 157,568

Dubuque, an important river port and railway centre, on right bank of Mississippi, Iowa, United States, 470 m N of St Louis Coal, lead, and zinc, lumber trade, saw-mills, waggon and carriage works, and manufactures of house fittings. Pop 36,500

Dudley, a town in Worcester, England, 9 m by rail from Birmingham. Coal and iron, blast-furnaces, making of nails, chain cables, grates, fire-irons, brass, and glass, communication by Dudley Canal, 13 m, to Birmingham, and Worcester Canal, 4 m from Birmingham Pop 48,809

Duisburg, a town of Prussia, Germany, near Rhine, 16 m. by rail N of Dusseldorf, in Ruhr coal basin and on Ruhr-Rhine Canal. Chemicals, machinery, cast-steel, iron, brass, copper, cotton Pop 93,000

Duluth, a great port and railway centre of Minnesota, United States, 135 m. N N E of St. Paul, at the head of Lake Superior, on a natural harbour (Superior Bay), 10 m long and 2 wide, divided from the Lake by a narrow strip of land 7 m long and little over  $\frac{1}{4}$  m wide with ship channels about 23 ft. deep at each end—Duluth Canal at N and Superior Entry at S It may be said really to form one town with Superior in Wisconsin which is merely divided from it by St. Louis Bay and River, the latter here forming the boundary between the two states The combined port is the terminus of the Northern Pacific Railway, and being also the centre of lines from the Red River Valley and other rich wheat districts, it has become the outlet for the iron and other ores and the lumber, as well as for the wheat and flour, from large districts in Canada and in the United States The annual tonnage entered and cleared, is about 17,000,000, the trade in ore is about 7,000,000 tons, in lumber about 417,000,000 ft, in wheat about 38,000,000 bushels, in other grain about 9,000,000 bushels, in flour 6,500,000 bushels, and in linseed about 13,000,000 bushels It receives general merchandise, coal, and iron goods. The navigation is closed from the beginning of December to the beginning of May Pop Duluth, 53,000; Superior, 31,000

Dumbarton, a county with a chief town of same name in S W Scotland; mostly hilly, rising to over 3000 ft. Coal, iron, cotton, and paper-mills, print, bleaching, and turkey-red,

works The town at the mouth of the River Leven, on the Firth of Clyde, has extensive ship-building and kindred industries. Area of county, 157,433 acres. Pop 113,865; pop. of town, 19,985.

Dumfries, a county with a chief town of same name in S W Scotland; mostly hilly, reaching over 2600 ft.; and drained by Nith, Annan, and Esk. Coal, lead, zinc, sandstone and limestone; cattle, sheep, pigs, salmon fishing The town, on the Nith, has manufactures of tweed and hosiery, and has in St. Michael's Churchyard the grave of Robert Burns. Area of county, 686,302 acres. Pop 73,571, pop. of town, with Maxwelltown, 20,240

Duna, or Western Dwina, a river of W Russia, draining a basin of 33,000 m, and after a course of 600 m entering the Gulf of Riga, 7 m N.W of Riga; connected by canal with the Dnieper, Neva, Gulf of Finland, Black Sea (Dnieper and Beresina Canal), and Caspian, traffic about 20,000,000 tons, but navigation is impeded by shallows and rapids

Dunamunde, the outport of Riga at mouth of Duna

Dundalk, seaport in Louth, Ireland, on bay of same name, 55 m N of Dublin, and 58 S of Belfast, depth on bar at high water 14 ft. neaps to 19 ft springs, locomotive works or Great Northern (Ireland) Railway Exports dairy produce and live stock to Holyhead (80 m) and Liverpool (135 m), with both of which there is daily communication. Pop 13,076

Dundee, a city in Forfarshire, Scotland, on N. side of Firth of Tay, 10 m up, 59 m by rail N N E of Edinburgh, 83 N E of Glasgow, and 20 E N E of Perth; connected with S. side of Tay by steel girder railway bridge (North British Railway) a little over 2 m. long, 86 spans, 77 ft. above water; distant by sea 48 m from Lerth and 420 from London. Depth on bar at mouth of Tay 19 ft. at low water of ordinary spring tides, and there is the same depth at low water in the deepest part of the ordinary tidal harbour There are four wet docks of which the deeper have 63 ft. of water on the sill at low, and 21½ ft. at high, water of ordinary spring tides, and two graving-docks and a slip, varying in length from 278 to 500 ft., and with depths of 13½ to 16½ ft. on the sill at high-water of ordinary tides. There are great manufactures of coarse linens (sheetings, ducks, drills, Osnaburges, canvas and yarns and cord), and the city is the chief seat of jute manufacture in Great Britain, all kinds of fabrics being produced, from the coarsest sacking to good qualities of carpet. The import of jute from India amounts to about 300,000 tons a year, the average value of the raw material on delivery being about 2d a pound, and the value of the industry about £3,000,000 a year, the total value of the jute, flax, and hemp, manufacture being about

£6,000,000 Considerable import of esparto grass and china-clay. There are also large manufacture and export of marmalade and other preserves, ship-building and sail-making, a valuable coast fishing, and a trade in whale-bone and whale and seal oil, the port being one of the few that still fit out a number of vessels every year for the seal and whale fisheries. The trade with the United States (mostly in burlaps and linen) amounts to over £1,600,000 a year. The tonnage, entered and cleared, is about 528,000, besides a coasting trade of 693,000 per annum, and some 122 vessels of over 106,000 tons belong to the port. Pop 161,173

Dundee, the centre of an important coalfield in Natal, South Africa, 236 m N.N.W. of Durban Pop (white) 1200

Dunedin, the chief town of the provincial district of Otago, South Island of New Zealand, and the largest, best-built, and most important, commercial place in that country. It is situated at the head of the sheltered Otago Harbour, 16 m. long, and  $\frac{1}{2}$  to 4 m wide. There is railway communication with Christchurch to the N (230 m), Invercargill to the S (139 m), and Port Chalmers 8 m down the harbour on the N.W. side. From the last a ship channel with a depth of over 20 ft at high-water extends up to Dunedin, gold-fields in neighbourhood, manufactures woollens, and exports wool, gold, and frozen meat. There is a regular line of steamers to Sydney and Melbourne, and by Auckland, Lyttleton, or Wellington, to London, Liverpool, and Glasgow. Distance from Invercargill by sea, 140 m, Lyttleton, 205, Wellington, 380, Sydney, 1614, and Melbourne, 1734 Pop 52,500

Dunfermline, a town in W Fife-shire, Scotland, 18 m by rail N.W. of Edinburgh. Extensive manufactures of fine table and other diaper and damask linens to the average value of about £1,000,000 a year, of which about half is exported to the United States, also coal, iron, limestone, and fire and terra-cotta clay in neighbourhood Pop 25,250

Dunkirk, a seaport in the department of Nord, N France, on Strait of Dover, 45 m E of Dover, most northerly port in country, 190 m by rail N of Paris. The depth of the entrance channel is 29 ft at high water of ordinary spring tides, and 26 ft. at neaps, these being also the depths in the tidal harbour, the depths on the sills of the docks are rather less, good canal and railway communication, carries on extensive cod fishing in Iceland waters. Chief imports from the United Kingdom are coal and tar, pig-iron, fire-brick, china-clay, and rape and other cakes, from Australia, wool, from India, rice, mustard; rape, linseed, and other seeds, jute, cotton, and maganese ore; and from other countries, nitrate of soda (Chile), wheat, barley, oats, maize, flax, mineral oil, iron and zinc ore (Spain and Italy), pyrites

(Spain), and sawn timber, chief exports to the United Kingdom sugar, phosphates and other natural manures, flour, potash, slates, rags, oils, potatoes, forage, fresh and dry vegetables, and to other countries iron and iron work, steel rails, salt (Iceland fisheries), cement, chalk, bottles, and bunker coal. Shipbuilding is carried on, but the beams and heavy forgings have to be imported from the United Kingdom. Of a total trade, entered and cleared, of over 3,000,000 tons, about two-fifths are British bottoms. Regular communication from London, Hull, Goole, Leith, and Manchester. Distance from Hull, 260 m, from Leith, 440 British consul Pop 39,000

Dunstable, a small town in Bedfordshire, England, 36 m. by rail N.W. of London, famous for straw-plait Pop 5147

Durango, a town in the interior of central Mexico, with near it a hill (Cerro Mercado) said to contain 200,000,000 tons of magnetic iron ore as yet little worked owing to deficient means of transport Pop 27,000

Durban, the great seaport of Natal, South Africa, on a land-locked bay, 70 m by rail S of Pietermaritzburg, 1479 from Cape Town, 511 from Pretoria, and 1854 from Bulawayo. Suction dredging is improving the condition of the harbour and shifting bar, the depth in the former being now from 23 to 27 ft at some parts of the wharves, and the depth over the latter being about 20 ft at low water of ordinary spring tides, with a tidal rise of about 5 ft. Large floating dock. The district is rich in fruit, and there is considerable manufacture of jams and preserves. Great transit centre, imports general goods, and exports wool, gold, sugar, coffee, tea, fibres, ivory, feathers, hides, horns, &c—generally all the import and export trade of Natal passes through it. The total annual tonnage entered and cleared is over 2½ millions. Regular communication from London and Southampton. Distance from Southampton, 6800 m; Calcutta, 4918, Mauritius, 1573, Cape Town, 823. Time for 12 noon at Greenwich, 24 P.M. Pop 40,000, of whom nearly half are whites

Durham, a town and a coast county in the N.E. of England, surface of the county hilly in the W (over 2000 ft) with a slope to the coast, the drainage being carried off by the Tyne, Derwent, Wear, and Tees. There is a very rich coalfield, and other minerals of importance are lead, iron, and salt. The industries are connected with shipbuilding and the kindred manufactures, chemical products, glass, iron, and earthenware. The town, 254 m N.N.W. of London, and 12 m S of Newcastle, on high ground overlooking the Wear, is a coal centre, and has blast-furnaces and the making of metal wares, carpets, and mustard. Area of county, 647,281 acres. Pop 1,873,324; pop of town, 14,641.

Seine and Rhone, and in addition some 1500 m. of canals have been deepened to 6½ ft. or over, those in the N to over 7 ft. Specially built barges carry 1700 tons, and the charge is as low as 3d and 4d per ton for distances of 100 m. It is now also proposed within coming years to spend some £24,500,000 in deepening and improving the Seine, Rhone, Garonne, and Loire, in improving the canals uniting the Scheldt and Dunkirk, making new canals from the Scheldt to the Meuse, between Comblour and Orleans, from the Rhone to the Loire, to Marseilles, and to Cette, and a great Northern canal, and in improving the harbours of Bayonne, Bordeaux, Cette, Dieppe, Dunkirk, Havre, Marseilles, Nantes, Rouen, and St. Nazaire. There are in France 26,700 m. of railway, of which 1700 belong to the Government, and over 2900 are local lines.

*Resources and Productions*—Of the whole area of France some 16 per cent are under forests, and nearly 70 per cent under crop and grasses. Cereals cover some 36,500,000 acres or more, and the wheat which occupies some 20,000,000 acres, and is nearly a quarter of the whole wheat crop of Europe, is valued at £75,000,000 a year. There are also oats (valued at about £31,000,000), rye, barley, buckwheat, maize (in the S W corner), potatoes (valued at £24,000,000), man-gold, sugar-beet, cider apples, chestnuts, walnuts, olives, and vines. The last cover an area of over 4,000,000 acres, and produce wine with an estimated annual value of over £47,000,000. The production of cider, chiefly in the Normandy districts, is about 500,000,000 gallons, but fewer than 1,000,000 gallons are exported. The total estimated value of crops is over £292,000,000. The produce of milk is valued at over £50,000,000, and there are over 13,000,000 cattle, over 21,000,000 sheep, and over 6,000,000 pigs. The export of cattle, butter, eggs, cheese, and poultry, especially to England, is very important. Nursery and market gardening are of great value. The culture of wheat is pretty general, except in the mountain departments, and so also is the culture of the vine, but for the latter the best known districts are the S W for the red Bordeaux wines known in this country as clarets, the Côte d'Or and the country to the S of it for red and white Burgundy, and the N E, particularly Marne, for champagnes. Light red wines are also produced along the lower Loire. Sugar-beet is grown mostly in the N, olives in the extreme S and S E, mulberries for silk-worms in the lower Rhone valley, and hemp, flax, hops, and tobacco in various districts.

The country has a number of small scattered coalfields. The total output is some 33,000,000 tons—about one-seventh of that of the United Kingdom, and a quarter of that of Germany—and as the consumption is over 45,000,000 tons there is a considerable amount

of import—mainly from the United Kingdom (to the extent of about half the total coal import) and Germany (about 14 per cent). The chief coalfield is in the N—a continuation of those of Belgium—and there are others round the N, E and S of, and across, the central plateau. Iron ore is found mostly in the N E along the Moselle, at the E end of the Pyrenees, and along the Rhone and Saône valley, rock salt along the N E, and sea-salt comes from the S E and western Mediterranean coasts.

*Industries*—With the coalfields scattered, and import of coal easy in the coast departments and in those that can be reached by water-carriage, the industries are well distributed. Woollen industries have settled in the N, the most convenient part for home-grown wool, as well as for foreign supplies from Britain, Australia, and the Argentine, through Dunkirk and Havre, cotton in the same districts, and for the same reason, N America being substituted for Australia and the Argentine, silk in the Rhone valley, where the climate, &c, are suitable for the production of mulberries and the rearing of silk-worms, iron-smelting and founding, and steel in the N E, and especially in the Saône valley, china and earthenware at Limoges, glass in the N and centre, paper in both E and W, watch-making along the Swiss border, and linen in the N. There is also a considerable fishing industry, cod (and cod-liver oil), herring, sardines, oysters, &c, the number of boats being over 27,000, with a tonnage of over 160,000, and direct employment for about one man per ton. A number of boats are fitted out every year for the cod-fishing at Newfoundland.

*Trade*—The total value of imports is about £239,000,000, of exports about £220,000,000. The total value of articles imported for home consumption is about £188,000,000, and that of those of home produce exported about £165,000,000. Of these imports over 64 per cent. are raw materials, 18 manufactures, and over 17 food products, while of the special exports over 26 per cent. are raw materials, nearly 55 manufactures, and over 18 food products. Of the imports over 14 per cent come from the United Kingdom, nearly 11 from the United States, 9 from Germany, nearly 9 from Belgium, 6 from Argentina, 6 from various British colonies (India, Australia, British Africa, and British North America), nearly 5 from Russia, 4½ from Spain, 3½ from China, and over 3 from Italy, while of the exports nearly 30 per cent are sent to the United Kingdom, 14½ to Belgium, 11 to Germany, over 5 to Switzerland, over 6 to the United States, and over 4½ to Italy. There is also an export of a little less than 1 per cent. to the British colonies from which imports come. The imports of France from its colonies are valued at some £15,000,000 or over, of which Algeria

ends the half, and the exports of France to the colonies about £10,000,000, of which Algeria again takes over a half. The imports received by France from the United Kingdom (with Malta and Gibraltar) are valued at some £27,000,000, and the exports sent to the United Kingdom (with Malta and Gibraltar) at £19,000,000. The chief British imports received by France are coal (on an average one-fifth of the total consumption); wool, machinery, woollen manufactures, and unprepared fancy feathers—all between £1,000,000 and £2,000,000; jute, chemicals and chemical manufactures, copper and copper ore, clays, iron, cast-iron, and steel, cotton goods and dressed skins—all between £500,000 and £1,000,000; silk manufactures, india-rubber goods, linen and hemp goods, pottery and glass ware, woollen yarn, rubber, tools and hardware, coal tar, raw hides and peltries, mohair yarn, leather goods and dressed peltries, paper, books, prints, &c.; cotton, cotton yarn, huns, lincen and lard, horses, and flax and hemp yarn—all between £100,000 and £500,000. Of imports generally, no matter from what country, the great raw materials are wool, silk and silk waste, and coal—all between £10,000,000 and £20,000,000; next, between £5,000,000 and £10,000,000, come raw cotton, oil-seeds and nuts, timber, and raw hides and peltries; between £1,000,000 and £5,000,000, copper, minerals of all sorts, flax, nitrate of soda, mineral oils, vegetable oils (except olive-oil), lead, unmanufactured tobacco, and jute. Of manufactures the great article is machinery (on an average about one-seventh of the whole), and next, all between £1,000,000 and £3,000,000, come silk, cotton, and woollen, fabrics of every kind, tools and hardware, paper, cardboard, books, and prints, and skins of food products the chief are wine (on an average nearly one-fourth of the whole value of this section—brought from Spain, Italy, Algeria, &c. for blending), cereals (over one-sixth), and coffee (valued at about £5,500,000); next, all between £1,000,000 and £3,000,000, come cheese and butter, meat (fresh and salted), fish (fresh, dry, and salted), table fruit, cocoa, sugar (French colonial), cattle, rice, vegetables (dried), and fecula.

The chief exports sent to the United Kingdom are silk and woollen tissues—each valued at between £4,000,000 and £6,000,000; millinery and artificial flowers, wines, raw sugar, dressed skins, butter, clothing and linen goods, leather goods and dressed peltries, wool, fancy feathers, copper and copper ore, fancy goods and toys, and yarn of all sorts—all between £1,000,000 and £4,000,000; timber, brandy and spirits (including liqueurs), raw hides and peltries, cotton tissues and trimmings, refined sugar, pottery and glass ware, cabinet-makers' wares, fruit, chemicals, and eggs—all between £500,000

and £1,000,000; tools and hardware, vegetables (fresh and preserved), potatoes, rags, forage, Parisian fancy goods, preserved fish, paper (and books and prints), silk, jewellery and precious stones, table poultry, seeds, watches and clocks, furniture, animal and other oils, gutta-serena, manufactures of crout-chons, machinery, carriage, perfumery, turnery and brushes, &c., and margarine. Of exports generally, no matter to what country they are sent, among raw materials the great articles are wool (on an average some one-fifth of the whole) and silk (from £6,000,000 to £7,000,000), raw hides, chemicals, copper and copper ore, timber, pig-iron and steel, rags, coal and coke, building materials, horses and mules, and cotton—all between £1,000,000 and £5,000,000; of manufactures the great articles are silk and woollen tissues, each equal to about one-ninth of the whole, next between £3,000,000 and £8,000,000 come furniture and turnery, Parisian fancy goods, cotton tissues, wearing apparel and linen goods, and prepared skins—all between £5,000,000 and £8,000,000, millinery and artificial flowers, tools and hardware, leather manufactures, pottery and glass ware, machinery, paper and books, woollen yarns, and jewellery—all between £1,000,000 and £5,000,000. The trade was carried in some 30,000,000 tons of shipping, of which slightly under 32 per cent was French (besides a coasting trade of over 11,000,000 tons), and slightly over 68 belonged to other countries: the United Kingdom had about 39 per cent, Germany 9, Holland over 3½, Spain 3, Italy over 2½. The French mercantile navy has a tonnage of about 1,111,000, of which about one-tenth are fishing vessels. The bounties and subventions paid to shipping amount to about £2,000,000. There is a stiff protective tariff. France has a high appreciation of the value of technical education, and there are regularly organised technical schools of various kinds at all the commercial and industrial centres. There are British consuls-general at Paris, Havre, and Marseilles, consuls at Bordeaux, Brest, Calais, Cherbourg, Dunkirk, Nantes, Nice, and Rouen, and vice-consuls at all the important commercial and industrial centres. Letter postage from the United Kingdom, 2½d per half-oz, postcards, 1d, parcels (exclusive of Algeria and Corsica), not over 3 lbs, 1s 4d, between 3 and 7, 1s 9d, between 7 and 11, 2s 2d, money orders to and from (including Algeria), telegrams, 2d a word, mails to and from London several times a day.

*Money, &c.*—The unit of account is the franc=9½d=100 centimes, and the weights and measures are according to the metric system, gramme=15 43 grains, kilogramme (1000 grammes)=2205 lbs avoirdupois, quintal (100 kilogrammes)=220 46 lbs, ton-

neau = 2205 lbs, litre = 1 76 pint; hectolitre (liquid) = 22 gallons, hectolitre (dry) = 275 bushels, metre = 39 37 ins, kilometre = 621 mile, metre cube, or stère = 35 31 cubic ft., hectare = 2 47 acres, kilometre carré = 386 square mile. The French flag has three vertical bars, red, white, and blue, the blue next the staff.

**Frankenthal**, a town of Bavaria, Germany, 7 m by rail S W of Worms, and connected with the Rhine, 3½ m to the E, by a canal, machinery, textiles, bells, brass, cork, &c. Pop 17,000

**Frankfort-on-Main**, a town of Prussia, on the right bank of the navigable Main (vessels of 1000 tons), 22 m up from the Rhine, and 112 m by rail S E of Cologne. Important railway depot, manufactures machinery (including sewing-machines), iron goods, perfumery, soap, and straw and felt hats. There is also a considerable transit trade in general goods and colonial produce, iron and steel ware, skins, leather, coal, &c, great banking and financial centre. Letters, 19 hours, parcels, 28. British consul-general. Pop 289,000

**Frankfort-on-Oder**, a town of Prussia, on navigable Oder, with canal communication with Vistula and Elbe, and 51 m by rail S E of Berlin. Organs, machinery, hardware, stone ware, sugar, starch, tobacco, paper, &c. Pop 62,000

**Fraserburgh**, a seaport on the N coast of Aberdeenshire, Scotland, 47 m by rail N of Aberdeen, and an important centre of the herring fishery. There is an extensive harbour with a depth at entrance ranging from 15 ft at high water of ordinary neaps to 18 ft at ordinary springs. Large pneumatic tool works. Pop 9105

**Fraser River**, a large river of British Columbia, Canada, with a course of 780 m and a basin of 138,000, navigable for over 100 m up by small steamers, on lower course good farming land, on lower and middle, gold, but salmon canning is the most important industry, the river, in the season, literally swarming with fish.

**Fray Bentos**, a town of Uruguay, South America, on R Uruguay, 170 m N W of Montevideo, depth on river bar, 16 to 17 ft, Preparation of Liebig's meat extract. Imports machinery, hardware, tin ware, coal, salt, timber, &c, exports extract of meat, tinned meats, jerked beef, tallow, lard, hair, bones, and bone ash. Pop about 5000.

**Fredericia**, a seaport of Denmark, on the Little Belt, good harbour with 18 to 19 ft. of water. Imports coal from United Kingdom, exports cattle, butter, eggs, &c. British vice-consul. Pop 9000

**Frederickshald**, a seaport of Norway, 85 m by rail S S E of Christiania, good harbour, with 24 ft. at entrance and 20 ft at quays,

sugar-refining and trade in timber and iron. British vice-consul. Pop 12,000

**Fredericton**, capital of New Brunswick, Canada, on St John River, 58 m N N W. of St John, reached only by small vessels; lumber trade. Pop 7500

**Frederikstad**, a seaport of Norway, 58 m by rail S of Christiania; harbour with 23 ft at springs. Imports coal, exports timber in log and sawn and planed. British vice-consul. Pop 15,000

**Freetown** See Sierra Leone

**Freiberg**, a town of Saxony, Germany, 20 m by rail S W of Dresden, neighbourhood has mines of silver, bismuth, nickel, copper, cobalt, zinc, &c. Manufactures gold and silver lace, chemical manures, colours, leather wares, &c. Pop 30,500

**Freiburg**, a town of Baden, Germany, 32 m N N E of Basle. Silk and cotton thread, chicory, beads, buttons, bell-founding, trade in wood. Pop 61,500

**Freiburg**, or **Fribourg**, a canton of S W. Switzerland, with a town of the same name, surface hilly (Bernese Alps), rising to over 7700 ft. Drained by Broie and Sarine flowing to Rhine. Cheese-making (Gruyère), watchmaking, straw-plait, wood, and cherry-brandy. The town, 19 m by rail S W of Berne, has manufactures of sewing machines and agricultural implements. Area of canton, 644 m. Pop 128,000, pop of town, 13,000

**Fremantle**, a seaport of Western Australia, at mouth of Swan R, 12 m by rail S W of Perth. Good, but exposed, anchorage and harbour, port of call for mail steamers. Imports coal and general goods, and exports sandal-wood, wool, pearl shell, copper and lead ores, timber, manna, cattle, and gum, cold storage for dairy produce, &c. Regular communication from London, Liverpool, Glasgow, Southampton, and Plymouth. Distance from Colombo, 3105 m, Durban, 4460, Albany, 336, Adelaide, 1320. Pop including suburbs, 24,000

**French Congo**, a possession of France, on the W coast of Africa, on both sides of the Equator, between Cameroon and the Congo Independent State, bounded along the S E by the Congo and its tributary the Mobangi, which separate it from the Congo Independent State, and passing out northward, to the E of Cameroon, into the French Soudan, by Bagirmi and Wadai. The chief settlements are Libreville, on the coast in the N (the seat of government, pop 3000), Loango on the coast in the S, Franceville in the interior, and Brazzaville on the lower Congo. The region is a very rich one, producing palm oil and kernels, kola-nuts, passava, gums, resins, dye-woods, rubber, cotton, cinnamon, cocoa, coffee, vanilla, pepper, and tobacco. There are ivory and gold, and copper and iron have been found. Unfor-

tunately the climate is very unhealthy, and, meanwhile, communications are bad, but a railway is to be made from Libreville to the Congo. The area is estimated at about 500,000 m, and the population at 12,000,000. Considerable trade is springing up at Loango, which is about 100 m N of the mouth of the Congo. Mails from and to London every four weeks, letters, 2½d. per half-oz., postcards, 1d., parcels, not over 3 lbs, 3s., between 3 and 7, 3s. 6d.; between 7 and 11, 4s., telegrams, 6s. 9d. a word.

#### French Guiana. See Guiana

**French Guinea**, the portion of French West Africa on the coast between Portuguese Guinea (S of Gambia) and Sierra Leone, with an area of about 95,000 miles, and an estimated population of 2,250,000. Chief town, Konakry, on the Island of Tombo, from which a road and a railway are being made to the Niger. Imports cottons, metals, and provisions and general goods, exports rubber, cattle, and palm kernels, ground-nuts and sesame are being tried.

**French India** consists of the five dependencies of Chandernagore (right bank of Hooghly, 20 m N of Calcutta), Karikal (on coast at mouth of Cauvery), Pondicherry (Madras coast), Mahé (Malabar district of Madras, 33 m N W of Calicut), and Yanam (near mouth of Godavery). They are of little importance. Pondicherry has cotton and jute weaving, and exports oil-seeds, and Karikal exports rice. Total area about 195 m. Pop. 275,000.

**French Indo-China**, the name given to the French territories lying in the N E of the most easterly of the three great peninsulas of southern Asia, and consisting of the dependencies of Tonkin (N E), Annam (along the E side), the Laos territory (E of Tonkin and Annam—hill tribes), and Cambodia and Cochun-China (both S W). Very irregular in outline, the region is bounded on the N by China, along the eastern side by the Gulf of Tonkin and the China Sea, on the S W by the Gulf of Siam, along the western side by Siam (the middle Mekong forming the boundary for a considerable distance), and for a short space along the N W by Burma. Cambodia and Cochun-China occupy both banks of the Mekong, and the mouths of the river are wholly in the latter. The country lies roughly between 8½° and 23° N, and the extremes of 100° 10' and 109½° E, with a length from N. to S. of about 1040 m, and an extreme width at the widest part of about 400 m. The area is estimated at about 280,000 m, and the population at 20,000,000. Tonkin, 34,800 m, pop. 9,000,000, Annam, 81,000 m, pop. 6,250,000, Laos, 96,000 m, pop. 270,000, Cambodia, 16,000 m, pop. 1,500,000; Cochun-China, 23,000 m, pop. 3,000,000. The rainfall is abundant, and the temperature in the low

ground ranges from 62° to 95° Fahr. The surface of Tonkin consists of the delta of the Red River—with its great tributaries of the Black River (right) and Clear River (left)—in the S E, plateaux in the N, and forest regions in the W. Owing to the soil brought down by the rivers the delta region is very fertile, with two harvests every year. There are collieries at Hongay, in the E. The staple product is rice, and those of minor value peanuts, castor-oil, mulberry, cotton, sugar-cane, and spices. Manilla hemp is being tried. Annam, mountainous except along the coast, is, according to the native metaphor, "a stick between two bags of rice," the bags being represented by Cochun-China and Tonkin, and the stick by a mountain chain about 620 m in length, and 4000 to 9000 ft in height, "leaving only a narrow belt of territory between it and the sea, a rather restricted zone, where from 4,000,000 to 5,000,000 of the inhabitants are engaged in the rice-fields, and, in the vicinity of Tourane (near the centre of the E coast) especially, in the cultivation of the sugar-cane. The lower slopes of the mountains, at present uncultivated, should prove valuable for the growth of tea and coffee, and experiments in this direction have not been unsuccessful when persevered with. Farther on, beyond the region inhabited by the Annamites, are the Laotian tribes, much lower down in the scale of civilisation and material well-being. As far as the banks of the Mekong, Laos, upper and lower, is found to be a country very uneven, well wooded, and with a certain amount of thinly-populated pasture-land." Its development is difficult owing to lack of transport facilities, the rivers being too short and rapid to be of any use. Tobacco and gutta-percha do well, and the raw sugar now sent to Hong-Kong for further treatment will become more valuable when it is dealt with on the spot, cotton, though short in staple, is valuable, and so also is silk, the soil being especially favourable to the growth of the mulberry. Other products are rice, tobacco, pepper, earth-nuts, timber, copper, and coal. Other minerals are known to exist, especially in the N—gold, silver, tin—and salt is produced, tapioca is also grown, dye-stuffs will probably also be of great value—cunao or "false gambier," sappan, lac, Indian saffron, pastel (blue), tuffa (red), dang-dang (yellow), and a number of others yielding various colours, and all probably of future importance. Laos is flat along the Mekong, and mountainous elsewhere. The great wealth is teak and other forest trees, but the difficulty lies in lack of communications, the Mekong being interrupted by falls, rapids, and shallows. The outlook at present is to Bangkok. Attention is being paid to the cultivation of rubber-trees, the poppy plant (to supersede Indian opium), rice, cotton, tobacco, and cardamoms; and there is also trade in hides and bones.

Cambodia has in the N and W. mountain ranges, rising to over 3000 ft and with deposits of iron and copper, and forests in the N E, but its importance lies in its great alluvial plains, inundated in the rainy season (April to October, except August), and its vegetable products of rice, cotton, maize, pepper, cinnamon, vanilla, cardamoms, sugar-cane, indigo, manioc, ramie, sesame, and gutta-percha. Cochín-China is low and flat, except in the N and E, and is very fertile. The great staple is rice, the value of which might be improved by greater care in the selection of grain for planting, so that the gocong (round) variety, that sent to Europe, and the bayado (long) should not be mixed, and the crop might be rendered larger and more regular as to size of grain. Other products, but on a small scale, are sugar-cane, tobacco, cotton, ground-nuts, mulberry, indigo, maize, betel, and hemp, and coffee, cacao, and vanilla are being tried. Extensive railway developments are taking place in the delta of the Mekong and Red River, especially from Saigon and Hanoi as centres, and the further extension of such communications, and attention to the natural resources of the country, would render the whole region one of very great value. The imports have an annual value of over £7,000,000, of which about half is sent from France and French colonies, and half from other countries, and the value of the exports is over £6,000,000, of which about five-sixths go to other countries, and less than one-sixth to France and French colonies. The great article of export is rice (more than half of total), of which the bulk goes to China and the East Indian Islands, and other leading articles are pepper, fish, coal, silk (raw and floss), cardamoms, copra, cotton, gutta-percha, hides, isinglass, pigs, and dried shrimps. The chief imports from France are piece-goods (cotton, woollen, and silk), wines, spirits, Parisian goods, iron ware, oils, crockery ware, paper, cement, and manufactured tobacco, from Britain and Germany, cotton, linen, and jute piece-goods, and beer, from America, flour and petroleum, from Russia and the East Indian Islands, petroleum, and from Britain, Japan, and Australia, coal. At Saigon, which is the chief port, the annual tonnage, entered and cleared (exclusive of the French regular lines), is about 1,000,000, and of this 38 per cent are British and 37 per cent German. Saigon was formerly the capital, but this is now at Hanoi, in Tonkin, and in Tonkin a large development of trade is taking place. Saigon is 800 m from Haiphong, at the mouth of the Red River, 930 from Hong-Kong, 650 from Bangkok, and 650 from Singapore. Trade is mostly done in piculs and dollars (*see* Hong-Kong). Postage letters, 2½d per half-oz., postcards, 1d, parcels, not over 3 lbs, 4s, between 3 and 7, 4s 6d, between 7 and 11, 5s, telegrams, *ad*

Turkey, 5s 5d a word; other routes, 5s 6d; mails as for China.

**French Somaliland**, a possession of France on the N.E. coast of Africa, on the S.W. of the Gulf of Aden, with a coast line of about 125 m from Cape Dumeira on the Strait of Bab-el-Mandeb to Cape Gumarlé, S of Tajura Bay, and with a width of 40 m. It imports general goods, and exports ivory, sheep-skins, gold, coffee, and gum. The seat of government and port is Jibutí or Djibouti (pop 15,000) from which there is a railway towards Harar in Abyssinia (open for 100 out of 200 m), which will, when finished, command a considerable amount of the trade with that country. Jibutí is 49 m. W of Zaila. Regular communication from London. Parcels to Jibutí, under 3 lbs., 2s 3d., between 3 and 7, 2s 9d., between 7 and 11, 3s 3d.

**French West Africa**, the Sahara, and French Soudan embrace all the W. of Africa between Tripoli and the Anglo-Egyptian Soudan on the E and the Atlantic, including the basins of the Senegal, and the Upper Niger, and the district N of Lake Chad, but exclusive of Morocco, the Spanish territory opposite the Canary Islands, Liberia, and the British and German territories between Cape Verd and French Congo. Telegrams to French Soudan, 1s 5d a word. *See* Dahomey, Ivory Coast, French Guinea, and Senegambia.

**Fresno**, a town in California, 207 m by Southern Pacific Railway S.E. of San Francisco, in the centre of a raisin-producing country, with trade in wine, fruit, and wheat, irrigation. Pop 12,500.

**Friendly, or Tonga, Islands**, a group of islands in the Pacific (British Protectorate), about 250 m E of Fiji, numbering about 180, of which only 32 are inhabited. Coral and volcanic, with active volcanoes, one over 2700 ft., climate healthy but damp. The chief productions and exports are copra, candle-nuts, oranges, bananas, pine-apples, pearl-shell, and bêche-de-mer. The exports are valued at £88,000, and the imports of general goods, valued at over £70,000, come from Sydney and Auckland, with which there is regular communication. Of a total tonnage, entered and cleared, of over 100,000 tons 89 per cent are British. Distance from Sydney, 1900 m, Auckland, 1080. Area, 374 m. Pop about 21,000.

**Frome**, a town of Somerset, England, on the Frome, 19 m by rail S of Bath. River suitable for dyeing, and town and district are seat of manufacture of broadcloths and other fine woollens, as well as of cloth-making appliances. Pop 11,055.

**Funchal**, the chief town of Madeira, on the S side of island, exposed harbour and roadstead, imports general goods, and exports wine, fruit, vegetables, and wickernork. British vice-consul. Pop 21,000.

**Fundy, Bay of**, an inlet of the Atlantic,

Canadian coast, separating Nova Scotia and New Brunswick, 140 m long, with an extreme width of 45 m, highest and most rapid tides in the world, with a range of 50 to 70 ft

Fürth, a town of Bavaria, Germany, 5 m by rail N W. of Nuremberg, mirrors, bronze colours, tinsel, wares of precious and other leaf

metals, metal toys, lead pencils, optical instruments, combs, &c Pop. 54,500

Fusan, a treaty port, with excellent anchorage, on the S E coast of Corea, receiving Japanese and Manchester goods, and exporting rice, beans, hides, &c. (no direct exports to United Kingdom) Pop probably 7000

## G

Gaboon, an inlet of French Congo, 50 m. long by 5 to 10 wide; on it is Libreville

Gainsborough, a river port of Lincolnshire, England, on the Trent, 21 m up from the Humber, reached by vessels drawing no more than 12 ft, canal connection with the midland counties, manufactures linseed-oil and cake; engineering works, agricultural implements, saw-mills Pop 17,660

Galapagos, a group of volcanic islands on the equator, 700 m W of Ecuador, to which they belong, seven large, six small islands, and many islets, large number of craters, some of which seem hardly extinct, reaching a height of nearly 5000 ft, climate tempered by cool Peruvian current Dense vegetation on S side which meets the moist trade wind, but barren on N Turtles, sugar, cotton, vegetables, archil. Exports archil, molasses, rum, and hides Area, 2900 m Pop 400

Galashiels, a town in Selkirkshire, Scotland, near the confluence of the Gala and Tweed, 33½ m by rail S S E of Edinburgh, woollen manufactures, especially tweeds, shawls, and plaids Pop 13,615

Galatz, the chief commercial city of Roumania, at the junction of the Pruth and Danube, 166 m by rail N E of Bucharest. Depth of river varies from 18½ to 22 ft, dry dock for steamers up to 1800 tons Imports British cottons and woollens, coal, tin and tin-plate, jute goods, iron and steel goods, soda and other chemicals, vegetable and other oils, varnishes, floor-cloth, rice, electric and gas engines, and agricultural machines, exports barley, wheat, rye, maize, rape seed and linseed, timber and sawn wood, and wine. British consul-general Pop 63,000

Galicia, a province of N E Austria-Hungary, surface undulating up to Carpathians, drained by Vistula and Dniester, and by tributaries of these and of the Danube (650 m in all navigable), timber, oats, rye, barley for export, cattle and horses, salt, coal, petroleum, iron, lead, zinc. Area, 30,307 m Pop 7,316,000

Galicia, a district of N W Spain, exporting cattle to United Kingdom, sardines

Galle, or Point de Galle, a seaport at the southern end of Ceylon, with a good harbour Distance from London, 6815 m, Cardiff, 6635, Liverpool, 6740, Glasgow, 6850. Pop. 37,500.

Gallipoli, a seaport of S Italy, on the E. coast of the Gulf of Taranto, 59 m. by rail S. of Brindisi, depth on the bar, 7 ft at low water, at quays, 16 ft Imports grain, flour, timber, iron, petroleum, sulphur, coal, and general goods, exports olive-oil, wine (both largely), figs, olive husks, argols, &c, little British shipping British vice-consul Pop. about 12,000

Gallipoli, a seaport of Turkey, at the eastern end of the Dardanelles, good anchorage in 11 fathoms ¼ m from shore Imports general goods, exports grain, wine, canary seed, aniseed, linseed, salt and tinned fish, cheese, onions, sponges, goats' hair, kid skins, &c. Pop 11,000

Galloper Sand, a bank in North Sea, 30 m. N E of North Foreland, with a lighthouse visible 11 m.

Galloway, an extensive district in S W. Scotland, embracing the shires of Kirkcudbright and Wigtown, dairy-farming and sheep-rearing

Galveston, a port of Texas, United States, on an island of the same name in the Gulf of Mexico, excellent harbour with 28 to 29 ft of water on the bar, and 20 to 25 ft. at the berths There is, from the British Empire, import of jute and jute butts Manufactures of flax, jute, and hemp, sheep-dip, earthenware, and salt—total value about £90,000, but the trade of the place is export (principally of cotton) out of all proportion to the import, the total value of goods sent to the British Empire being over £7,000,000 (seven-eighths of it cotton), while trade to the value of double this amount was carried in British vessels The total value of exports is over £17,500,000 Of a total tonnage, entered and cleared, of 1½ million tons, almost one million are British bottoms, and of this over one-quarter was direct trade. Galveston competes with New Orleans for first place in export of cotton Other leading exports to the British Empire are wheat and flour, spelter, maize, and cotton-seed meal and cake Of the whole export the British Empire takes 44 per cent., Germany 27½, France 16, and Belgium and the Netherlands the bulk of the rest As Galveston is the natural outlet for Texas, Arkansas, Missouri, Oklahoma, Kansas, Colorado, Nebraska, South Dakota, Wyoming,

New Mexico, Arizona, Utah, and California, the trade is rapidly increasing. A deep water channel has been made from the town to La Porte on the mainland, in San Jacinto Bay on the N W of Galveston Bay, and here a new commercial harbour and a naval arsenal, with a dry dock, &c, are being established. The channel has a length of 26 m, and a width of 200 ft, while the depth is being increased to 25 ft at low water. To La Porte, therefore, in all probability a considerable amount of the trade will ultimately pass, as the situation is more convenient for the meeting of land and water communication. When the Isthmian Canal is made, no matter whether by Nicaragua or Panama, La Porte, as the nearest harbour for the handling of cargoes passing from ocean to ocean, should have a very prosperous career. British consul Pop 39,000.

**Galway**, a seaport in a county of same name in Connaught, centre W. coast of Ireland, on Galway Bay, at the mouth of the Corrib, and 127 m by rail W of Dublin, docks take vessels up to 16 ft. Salmon, herring, and other fisheries. Exports wool and black marble. Pop 13,426.

**Gambia**, a British crown colony on both sides of river of same name, in extreme W of Africa, low and swampy, but fairly healthy during dry months, rainfall, 49 in, mean temperature ranging from 60° to 85° Fahr. Imports (valued at about £150,000), cottons, rice and other provisions, and general goods, exports (about £240,000), ground-nuts (the great staple, but uncertain, as it depends on rainfall), rubber, kola-nuts, and of less value, palm kernels, wax, and hides. Of 250,000 tons, entered and cleared, 76 per cent. are British. Chief town, Bathurst (pop 9000). The river, a very large one, 4 m wide at mouth, is navigable from June to November for vessels of 160 tons, 400 m up to Barraconda. Mails from and to London every fortnight, letters, 1d, postcards, 1d, parcels, under 3 lb, 1s, between 3 and 7, 2s., between 7 and 11, 3s., money orders exchange, telegrams to Bathurst, 3s 6d a word. Area of colony, 69 m. Pop 13,500, and adjacent territories under direct British control have an area of about 4500 m, and an estimated pop of 77,000.

**Gandia**, a small seaport in S W of Spain, 47 m by rail S E of Valencia, with considerable export of fruit—oranges, raisins, tomatoes—and wine. Imports coal, drugs, timber, flour, &c, of a tonnage of about 280,000 tons, entered and cleared, over 100,000 are British bottoms, and the bulk of the rest Spanish and Norwegian, harbour with depth of 19 ft. British vice-consul. Pop 9000.

**Ganges**, a great river of north-eastern India, rising in the Himalayas, of which it cuts across the southern range and then flows down the great north-eastern plain in a general

easterly direction till it meets the Brahmaputra, the joint rivers flowing S through the greatest delta in the world to the Bay of Bengal. The chief mouths are the Hooghly, Matla, Ramnagar, Bakswar, and Meghna. The chief tributaries are the Gunti, the Gogra, and the Gandak on the left, and the Jammu, Son, and Damodar (Hooghly) on the right. During the dry season the water is maintained by the Himalaya rains and melted snow. Hardly anywhere are the inundations restrained by embankments, as the water is valuable for rice-growing, and the silt for fertilising the soil. The goods traffic is mainly by native craft, down-stream during the wet season with cargoes of grain, timber, oil-seed, cotton, and salt, the boats returning without load. Length, 1500 m, basin, 390,000. The Upper and Lower Ganges canals, with a length of about 1000 m (400 navigable), supply irrigation for 1800 m of the country between the Ganges and the Jammu.

**Gard**, a coast department of S France; surface flat, sloping up to the Cevennes (5140 ft); drained mostly by Rhone and its tributaries; rearing of silk-worms, iron, steel, vines. Area, 2253 m. Pop 421,000.

**Garonne**, the chief river in the S W. of France, having a length of 316 m, a basin of 22,000 m, and the estuary of the Gironde 50 m. Steamers can go up as far as Bordeaux; Toulouse is the head of its navigation, and there the river is joined by the Canal du Midi connecting it with the Mediterranean, as well as by a canal which provides water communication for the country along first the right bank and then the left for 120 m down.

**Garrucha**, a port of Almeria, S Spain, 41 m E N E of Almeria, with export of iron ore, silver, lead, lead ore, esparto, and grapes, chiefly to United Kingdom. Formerly vessels for foreign trade were all British, but Britain has now rather more than one-third of about 340,000 tons, Spain less than another third, load and unload from open shore. Imports coal, rice, soap, machinery, petroleum. British vice-consul. Pop 5000.

**Garston**, a port of Lancashire, England, on N side of Mersey, with docks with 16 and 17 ft, and 25 and 27 ft, on sills at neap and spring tides respectively, exports large quantities of coal. Pop 17,288.

**Gateshead** See Newcastle-on-Tyne.

**Geelong**, a port of Victoria, Australia, on Corio Bay, on the western side of Port Phillip, 43 m by rail S W of Melbourne, harbour at high water takes vessels up to 23 ft, and is being deepened, centre of the colonial woollen industry, and is famous for its tweeds, paper, cement, ropes, salt, vineyards in neighbourhood. Imports all sorts of manufactured goods, iron and machinery, &c, exports wool, tallow, hides, preserved meats, &c. Pop with suburbs, 23,600.

**Gefle**, a port of S Sweden, on an inlet of the Gulf of Bothnia, 71 m by rail N W of Upsala; outer harbour, 4 m. from the town, takes vessels of 19 to 22 ft, the inner only to 13½, vessels of over 20 ft. draught must anchor at Bonan 8 m below, two patent slips about 900 ft long. Imports coal, grain, salt, &c, exports sawn and planed timber, iron and steel, and wood-pulp. Of imports of over £500,000 more than half come from the British Empire, and nearly a quarter from Germany, and of exports of over £1,700,000 more than half go to the British Empire, and about one-seventh to Germany. Of over 800,000 tons, entered and cleared, less than 15 per cent are British. Regular communication from London, Tyne, Manchester. Distance from London, 1242 m, Leith, 1143; Liverpool, 1593, Hull, 1148. British vice-consul. Pop 29,500.

**Gellivara**, a town in N Sweden, 126 m by rail N by W of Luleå, with large deposits of iron ore. The railway passing westward from the place to Ofoten Fiord, in Norway, is the most northerly in Europe, total length, 304 m.

**Gelsenkirchen**, a town of Westphalia, Prussia, 5 m by rail N E of Essen, with coal, blast-furnaces, cast-steel, boiler works, &c. Population, 37,000.

**Geneva**, a Swiss town in a canton of the same name, at the western end of Lake Geneva, where the Rhone issues from the lake, 85 m by rail S W of Berne, and 388 S E of Paris. Manufactures of watches, jewellery, chronometers, cutlery, mathematical instruments, musical instruments and boxes. Letters, 23 hours, parcels, 23. British consul. Area of canton, 108 m. Pop 133,000. Pop of town, 105,500.

**Genoa**, the chief commercial port of Italy, in the N W, on the gulf of the same name on the Mediterranean, 79 m by rail S E of Turin, 93 S S W of Milan, 171 N E of Marseilles, and 801 S E of Paris. Harbour accommodates the largest vessels, and there are three graving docks with lengths of 320, 587, and 720 ft—the last 27½ ft on sill. There is cold storage. The town has iron and machinery works, shipbuilding, cotton, wool, and silk, mills, macaroni and vermicelli works, sugar refineries, oil works, tanneries, match works, making of artificial flowers, and working in marble, alabaster, and coral, but its chief importance lies in the great value of its imports and exports, the former reaching a value of over £20,000,000, and the latter of over £9,500,000, both exclusive of coasting, and of a transit export trade of over £6,000,000. The chief imports (those principally or largely from the United Kingdom or the British Empire distinguished by an asterisk) are raw cotton\*, wheat and other grain, silk, coal\*, iron and steel manufactures and machinery\*, chemical products (nitrates, and potash and

caustic soda\*), seeds\*, raw hides\*, fats\*, machinery, coffee, timber, sugar, wool, preserved fish\*, dyeing and tanning materials, copper and brass\*, gum-elastic or gutta-percha\*, oils (mineral, palm and cocoa-nut\*), and linseed and cotton, tin\*, china-clay, chalk, and lime\*, colouring materials and indigo\*, secula\*, preserved meats, tobacco, vegetable fibres (mostly hemp and jute)\*, gums and resins, salted gut, lead, zinc, artificial manures\*, and bricks and tiles\*. The chief exports (distinguishing those sent to Britain and parts of the British Empire in the same way), are silk (in all forms), cotton yarns and cloth, wine\*, olive-oil, paper (stationery and paper manufactures), rice, flax, jute, and hemp, yarns and fabrics, hats (felt, and straw and straw-plant), hides (raw and tanned\*), fruits and vegetables (preserved or dried\*), small wares, cheese and butter, coral\*, furniture, glue, manufactures of gum-elastic or gutta-percha, lead, statuary (marble\*), machinery, matches\*, zinc ore\*, mushrooms, books, lithographs, &c, macaroni, &c\*, cord, corn-flour\*, sweetened spirits, and vegetable products. A very large trade is done with Central and South America. Of a total tonnage, entered and cleared, of 10,000,000 tons, over 20 per cent. are British, 42 Italian, 14½ German. Regular communication from London, Liverpool, Southampton, and Hull. Distance from London, 2219 m, Liverpool, 214½, Glasgow, 2254, Cardiff, 2039. Letters, 32 hours, parcels, 2½ days. British consul-general. Pop 235,000.

**Georgetown** See Demerara.

**George Town**, the chief town of Penang.

**Georgia**, a southern coast state of the United States, flat and swampy towards the Atlantic on the E and in the S, but mountainous (Appalachians) in the interior and to the N, rising to 5000 ft, drained by the Savannah and other streams, most of them navigable for some distance. Along the coast are the Sea Islands famous for the quality of their long-staple cotton, and cotton is the main product all over, rice and sugar are also grown, oak and pine forests furnish a large quantity of timber, coal and iron, oysters, clams, and turtles, on coast. Manufactures of cottons, woollens, steel, iron, and flour, saw, and pulp, mills. Area, 58,980 m. Pop 2,216,500.

**German East Africa**, a possession of Germany on the E side of Africa, extending along the coast for 620 m, from British East Africa to Portuguese East Africa, from which it is divided by the Rovuma River, from Lake Nyassa to the sea. It is separated on the W from the Congo Independent State by a line drawn from the intersection of 1° S and 30° E to the N end of Lake Tanganyika and by the lake itself, and from Rhodesia and British Central Africa, on the S W, by a line drawn from near the S end of Lake Tanganyika to near the

N. end of Lake Nyassa. The length is about 730 m., the width from Lake Tanganyika along 5° S to the sea, about 620, and the area is estimated at 384,000 m and the population at 6,000,000. The country rises from the coast to the central plateau, the lower districts having forests of mangrove, cocoa-nut palms, baobab, tamarinds, &c., while on the higher grounds there are acacias, cotton trees, sycamores, and banians. Besides bananas, maize, manioc, and potatoes, grown for food, cocoa-nut trees yield copra, and rubber is being fostered, while coffee, sugar, rice, cotton, tobacco, agave, hemp, sisal hemp, vines, and vanilla, are all cultivated for commercial purposes. European grains and fruits, both northern and southern, are all successful. Coal, gold, iron, copper, lead, salt, mica, garnets, and ivory, are all found. Half the export trade consists of rubber and ivory, but copra, rum, and some of the other products show growing importance. Five great caravan routes traverse the district, and a network of tracks connect the stations with the trade centres, but the resources of the country cannot be properly developed without railways, and the extension of the existing lines and the making of new ones, though proposed, remain meanwhile in abeyance, as the German Parliament refuses to grant the necessary funds. Till these are made it is impossible to bring the coffee and cocoa, which can be grown only in the highlands, at some distance from the coast, properly to market. The imports are textiles and general goods, mostly through Zanzibar, but largely also direct from Germany and India, very little direct from the United Kingdom. The exports go again largely to Zanzibar, and direct to Germany, but little to any other country. Chief ports Dar-es-Salaam and Bagamoyo. Postage, 2½d per half-oz., postcards, 1d; parcels *via* Hamburg, not over 3 lbs, 3s., over 3, but not over 7, 3s 6d; over 7, but not over 11, 4s, mails to and from London every fortnight, telegrams, 3s 2d to 3s 7d, according to place, money orders exchanged.

German South-West Africa, a possession of Germany in the S W of Africa, with a coast line of 930 m., between Angola and Cape Colony, broken in the middle by the small strip of British territory at Walfish Bay. From Cape Colony on the S it is divided by the Orange River, the eastern side follows the 20th degree of E latitude to 22° S and then 21° E to 18° N, the western boundary is the S Atlantic, and the northern the Kunene River, as far as the Humbe cataracts, and thence by an easterly line to near the point on the N E already indicated, from which a long narrow finger is projected eastward to the Zambesi, between the Katima rapids and the mouth of the Chobe River. The length from N to S is about 780 m, the greatest breadth of the com-

pact part about 600, the estimated area 322,450 m, and the estimated population 200,000. The N W is known as Deutsch-Damaraland, and the S W as Deutsch-Namaland. All the S and much of the E is desert. Walfish Bay being British, the only harbour, meantime, is Angia Pequena, but a new harbour has been made at Swakopmund, immediately N of Walfish Bay, and this is connected with Windhoek, 180 m. E (237 by rail), in the interior, which is the seat of government. Roads connect outlying districts with the railway at a number of points, and other railways are proposed, to join the northern mineral district with Tiger Bay or Port Alexander, in the S of Angola, or with Angra Frio, at the mouth of the Khumib River, in the northern part of the German coast, as well as with the existing Windhoek line. The northern part of the country is pastoral, with enormous herds of cattle and flocks of sheep and goats, as well as some ostrich farms, vegetables and fruit are grown, and cotton, vines, and tobacco are being tried. There are rich deposits of copper at Goro, some 93 m N of Swakopmund, as well as in Otavi in the N. The great bulk of the imports of textiles and general goods comes from Germany, about one-eleventh of the whole from Cape Colony, and one-fiftieth from the United Kingdom. The great export is guano, but live stock, wax, and feathers have now some value, and the minerals will probably be of importance by-and-by. Postage, 2½d per half-oz., postcards, 1d., parcels, *via* Hamburg and Walfish Bay, same as German East Africa, *via* Hamburg and Cape Town, not over 3 lbs, 5s 6d, between 3 and 7, 6s, money orders exchanged, telegrams, to Swakopmund, 3s 2d a word.

Germany—*Surface and Size*—Germany, or the German Empire, the leading country of central Europe, lies between 47½° and 56° N. and between 6° and 23° E, occupying about one-eighteenth part of the whole area of the continent. In industrial and commercial importance it ranks first among the continental nations, second as regards population (being surpassed by Russia), and third as regards area (being surpassed by Russia and Austria-Hungary). The boundary along the north is formed by the Baltic Sea, the Jutland Peninsula of Denmark, and the North Sea, on the west by Holland, Belgium, and France; on the south by Switzerland and Austria-Hungary, on the south-east by Austria-Hungary, and on the east by Russia. The surface slopes gradually from south to north, from the Alpine border along Switzerland and the Tyrol, by the Bavarian-Swabian plateau, through the Central Highlands between Hesse and Saxony, and thence along the great European Plain till the land passes under the shallow water along the Baltic and North Sea coasts. In other words there is a roughly

rectangular North Germany with an extended corner on the north-east, all in the European Plain, with an average height of some 300 ft above sea-level, with a rectangular Southern Germany projecting from it along its western half. The latter has a much greater average height, and rises on the Alpine side in the Zugspitze to 9710 ft above sea-level.

The gradual slope from south to north has the effect of largely modifying the difference of latitude, so that Kiel and Stettin have actually a slightly higher average mean temperature than Munich. Greater variety results from the longitude, the places to the east having a more severe climate than those to the west. This is owing to the cold north-east winds to which the east and north-east parts of the country are exposed, and indeed the want of shelter renders the winters all over the plain very severe. There are other differences due to the exposure of the minor slopes, and to the protection which the different mountain ranges afford to the valleys in and around them—*eg* in what is the warmest part of the whole country along the Rhine, Mosel, Neckar, and Main.

The total area of the Empire is 208,800 sq m, the distance from the boundary with Denmark on the north to the extreme south of Bavaria is about 580 m. (almost the same distance as from the north of Scotland to the south of England), from the extreme east to the extreme west about 740 m, diagonally from Schleswig to Upper Silesia about 580 m, and diagonally from Upper Alsace to the Russian border about 800 m.

*Constitution, Government, and People*—The German Empire consists of the Kingdoms of Prussia, Bavaria, Saxony, and Wurtemberg, the Grand-Duchies of Baden, Hesse, Mecklenburg-Schwerin, Saxe-Weimar, Mecklenburg-Strelitz, and Oldenburg; the Duchies of Brunswick, Saxe-Meiningen, Saxe-Altenburg, Saxe-Coburg-Gotha, and Anhalt, the Principalities of Schwarzburg-Sondershausen, Schwarzburg-Rudolstadt, Waldeck, Reuss (elder line), Reuss (younger line), Schaumburg-Lippe, and Lippe, the Free Towns of Lubeck, Bremen, and Hamburg, and the Imperial Territory of Alsace-Lorraine. Details of these are given under their separate headings. The modern empire became possible after the war between Prussia and Austria in 1866, but was not constituted till 1871, when the enthusiasm resulting from the brilliantly successful campaign against France, and the masterful genius of Bismarck, at last bore down all opposition, and at Versailles, during the siege of Paris, the King of Prussia was formally proclaimed German Emperor. The states included in the federation then united to "form an eternal union for the protection of the realm and the care of the welfare of the German people."

The Emperor as representing the state has the power of declaring defensive, but not offensive, war, of making peace, of sending and receiving ambassadors, and of concluding treaties with other nations except in matters that are regulated by imperial legislation. The power of legislation lies with the *Bundesrath* or Federal Council, and the *Reichstag* or Imperial Parliament representing the nation. The former consists of 58 members representing the different individual states and chosen by the governments of these states for each session; the members of the latter (397 in number) are elected by universal suffrage under ballot for periods of five years, which is also the term of the duration of a parliament. The electoral districts vary greatly in size. All imperial laws require approval by a majority of both houses, and must thereafter be countersigned by the Chancellor of the Empire and promulgated by the Emperor. Meetings must be held every year, and members of the *Bundesrath* are entitled to be present at the deliberations of the *Reichstag*. The ministers do not form a cabinet and are not responsible to the parliament. The population of the German Empire is nearly 56,500,000.

*Communications*—Excepting in the Alpine portion of the country, where the drainage is by the upper Danube, the gradual slope from south to north brings about the flow of all the considerable rivers in, roughly speaking, the same direction. The chief of these from east to west are the Memel, Vistula, and Oder, flowing to the Baltic, and the Elbe, Weser, and Rhine, flowing to the North Sea. Of the Memel only the mouth (which of course is the most important part), and of the Vistula only the mouth and lower part (again the most important portion), are in Germany, but the others are largely or wholly within the Empire. Their courses are long, and the flow slow, and as there is sufficient depth to render them navigable for long distances for boats of light draught, their importance in connection with the trade of the country is very great indeed. Over 7000 m. in all are navigable naturally, or have been rendered so by artificial means, and of these nearly 1300 will admit of vessels drawing 4 ft 11 in draught or over, while in less than 700 is the draught restricted to 2½ ft.

How much the Germans value and use such an admirable means of cheap transport is shown by the fact that, within the last twenty years, the number of canal and river boats has increased from about 18,000 to 23,000, and the carrying capacity from about 1½ million to 3½ million tons, the latter largely surpassing the sea-going tonnage of the country. By far the greater part of the increase has taken place in the boats of 400 tons and upwards, and in those propelled by steam. It has been cal-

culated that this increase in number and size has brought about a reduction of transport rates to the extent of about 50 per cent., so that the present cost of transit per ton per mile is a little less than  $\frac{1}{4}$ . While the United Kingdom is not so well situated in respect of river communication, there is here an undoubted lesson to be learnt.

Moreover, these rivers are united by an admirable system of canals which are equally advantageous for cheap carriage—the Finow and Mullrose connecting the Oder and the Havel-Elbe; the Elbe-Trave from Lauenburg to Lübeck, thus connecting the North Sea and the Baltic; the Stecknitz between Stecknitz and Trave, the Ruppın and Plauen; the Bremerrörde between the Oste and the Hume, the great South German Ludwig's Canal, between the Danube and the Main; and the Dortmund-Ems canal, which brings the North Sea harbour Emden into direct touch with the industrial centres. An important proposal has been made also for a Central Canal which would, by the construction of new, and the improvement of old, waterways, have united all the navigable Prussian rivers into one uninterrupted whole. The scheme is meanwhile in abeyance owing to the opposition of those concerned in profit derived from land—the agricultural interest—who think that it would affect them injuriously, but sooner or later it will be carried out with great advantage to the Empire. There is also the great Kaiser Wilhelm Canal from the North Sea to the Baltic at Kiel. The importance of all these systems is readily seen when we consider that canal transport is generally less than half of that by rail for a corresponding distance. The total length of canals is about 1600 m., of which over 400 are navigable by vessels of 4 ft. 11 in. draught or over.

The system of water-ways is also important for the seaports. Germany has a coast-line of about 1000 m., but as it is formed by the gradual slope of a low plain into the shallow waters of the Baltic and North Sea, the only positions for seaports are at the mouths of the large rivers. Hence the inland water-ways feed the oversea outlets. Owing to this, and to their forming the means of ingress to and egress from a very large part of central Europe, some of the ports enjoy a large amount of trade, while Hamburg takes rank as one of the great commercial centres of the world. The Baltic ports are of less value than those of the North Sea, owing to the severity of the winter climate, but the opening of the Kaiser Wilhelm Canal has proved of great advantage to Kiel, and the navigation to Stettin is now kept open in winter by powerful ice-breakers. In sea-borne traffic Germany aims at placing "a girdle of transport lines round the globe",

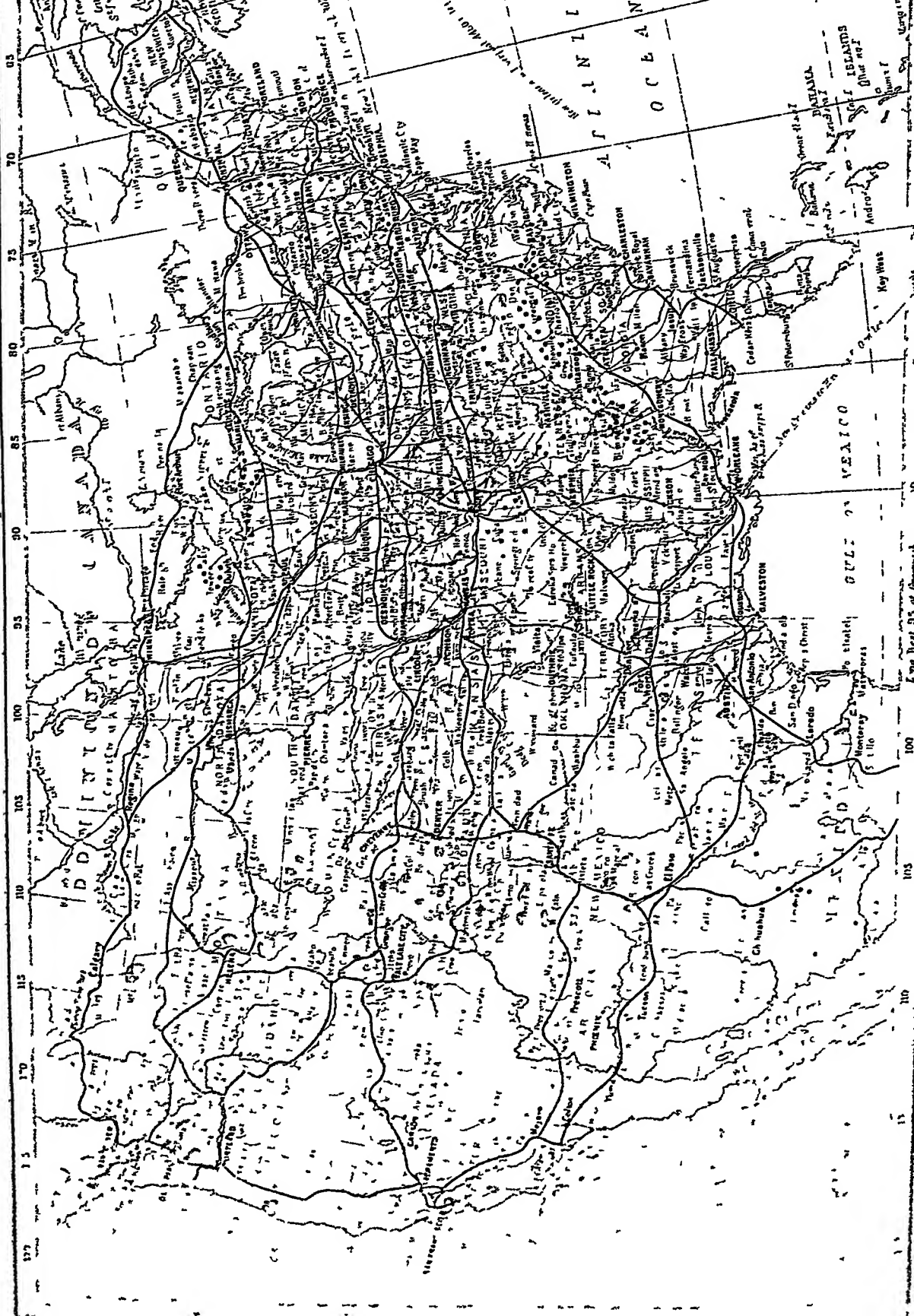
and in this ambition she is making, with true German perseverance and patience, most earnest efforts to succeed.

The nation has also a most complete and extensive railway system, admirably adapted to the requirements of the country for strategic, industrial and commercial purposes. In Germany itself there is hardly a point that cannot be reached from Berlin in twenty-four hours, while the lines along the Rhine form  $\frac{1}{2}$  the St Gothard Tunnel an important route from Great Britain to India, and that from Strasbourg to Munich is part of the direct route from Paris to Constantinople. Berlin itself occupies a central position in the European railway systems, and is on the direct route (by Cologne, Berlin, Warsaw, and Samara) to Asiatic Siberia and the East. The total length of the railways (including 1000 miles narrow-gauge) is 31,000 miles, of which 28,000 are owned by the imperial or state governments. The profits from these form a valuable source of revenue.

*Resources and Productions.*—The resources and productions of the various states and districts will be more fully dealt with under each here we note only general points. About half the land of Germany is arable, and though the greater part of the soil in the north and north-east is by no means good, the natural industry and perseverance of the people have almost everywhere worked wonders. In the north-east and centre a considerable quantity of potatoes is grown, partly for the distillation of spirits and partly for export; and there is also extensive cultivation of beet for the manufacture of sugar, and for distillation. The beet-sugar can, owing to the action of protective duties and the long hours of the workers employed, be sold so cheap in the foreign markets that it has almost brought about the ruin of the West Indian trade in cane sugar. The south-western districts produce vines, hops, tobacco, wheat, and barley. Saxony and Silesia are famous for their wool; and flax and hemp are grown between the lower Oder and the lower Vistula. The other chief crops are rye and oats. Forests occupy about one-fourth of the whole country, and are carefully looked after and managed on the most scientific principles.

The mineral wealth of Germany has long been famous, and since the development of the extensive coal deposits it has become still more valuable. The chief districts concerned in the production of true coal, of which over 150 million tons are now raised yearly, are along the river Ruhr in Westphalia, in Upper and Lower Silesia, in south-west Germany about Saarbruck, about Aix-la-Chapelle, and in Saxony. Supplies of tertiary lignite are got to the amount of some 35,000 tons, from Anhalt and Brandenburg. Iron is found more

UNITED STATES AND CANADA.





lower than one-third in agriculture, cattle-raising, &c.; about two-sevenths in trade and commerce; about one-seventh in the various professions, and less than one-tenth in forestry, fishing, &c.

*Commerce.*—Till after the middle of the nineteenth century Germany was almost entirely agricultural, but since that time it has become one of the leading manufacturing and trading countries of the world, and its industries, branching and diversifying in all directions, have not only caused it to enter into keen competition in all the old markets, but have raised a desire for new outlets resulting in the creation of a colonial empire, and of a great navy, the mercantile marine including some of the largest and fastest vessels afloat.

In carrying out the national purpose, the great factor has undoubtedly been the excellence of the thorough, and thoroughly organised, educational methods. Primary education—compulsory to the age of fourteen—being over, the pupils may pass to middle or continuation schools which fit them for business, or to a very large number of different kinds of special technical or commercial training institutions, where highly specialised instruction is given in the particular branch or branches which are to be of importance in work from day to day.

The great attention paid to chemistry tells its own tale. In the race with other countries having sufficient mineral wealth, Germany has no outstanding advantage, and yet in the latter half of the nineteenth century German chemi-

strical industry is now got from materials made almost entirely in Germany. The natural indigo will probably in the same way have to give place to the artificial article—a most serious matter for such an important Indian product. In 1886 Germany imported 1036 tons of indigo, in 1899 the import was practically nil, and the export 256 tons. The works that hold this patent have 100 thoroughly trained chemists to 6000 workmen.

Other results are the same. By economy of process Germany can provide 70 per cent of the world's supply of quinine at a profit of over £200,000 a year. The great aim of the country is always, by means of self-production, to render itself independent of foreign imports. The total value of the production of the German chemical industry amounts to over £50,000,000. "These are huge figures for an industry which is only about three-quarters of a century old, and they may be considered as the interest accruing from the capital invested by the State in chemical instruction. The dybount of national wealth created by the German chemical industries and expressed above in figures assumes a still more striking significance when it is taken into consideration that the advance of chemical knowledge in Germany has enabled her, in many instances, to export chemical products which she was formerly compelled to import, or, in other words, to receive money from abroad instead of disbursing it, creating, at the same time, new sources of home employ-

ment. The following articles of export, formerly imported, may be mentioned in this respect —

“Potash, formerly imported from Russia and America, potassium saltpetre from the East Indies, soda from the United Kingdom, ultramarine from Persia, dyes (various) from various countries, sugar from the East Indies; madder dyes from France, indigo from India.”

“The sums expended by the German States upon chemical instruction have been amply repaid by the creation and rapid growth of the most important chemical industries, and the addition of large sums to the sum total of national wealth. Germany has been enabled, by means of the thorough chemical instruction afforded by her universities and technical high schools, to rise within the last fifty years to the front rank in chemical industries, and not only to render herself independent of many imports from foreign countries, but also to deprive the latter of many lucrative branches of chemical manufacture, and to substitute her own in their stead. Having attained the highest position in the world in chemical industries, she is not abating her efforts, content with the measure of reward which has fallen to her share. On the contrary, it is universally recognised that the efforts made hitherto must be increased, and more carefully and judiciously applied, if the German chemical industries are to maintain and strengthen their position in the future.”

There are 4500 chemists employed in various works throughout Germany, and on all hands every effort is made to improve old processes, to cheapen methods of production, to render, by fresh discoveries, some new manufacture possible, and to enable trade to be pushed into a new corner.

Another thing that has largely benefited the German is his adaptability. When he enters on competition in an old market, or sets out to try to capture a new one, he endeavours to find out what the buyer wants, and to produce in style, pattern, &c, what may best suit the fancy of his customer, and be therefore most likely to sell. Into his business methods and work, too, he carries the national characteristics: he is hard-working—the long hours worked is everywhere one of the great advantages of the German manufacturer—patient, methodical, persistent, and these things pay. He never forgets business, and seizes a chance of pushing it. As a recent example, it may be noted that Stettin manufactures and ships to Hull large numbers (in 1900 to the weight of 134 tons) of sewing-machines, which by the energy and push of the exporters are consigned direct to small villages in out-of-the-way parts of Yorkshire, and this sale has begun to spread to the neighbouring counties. Into all his work, too, he carries the quality of his scientific curiosity and inquiry, and

every new idea and process likely to prove of economic importance or value finds some one ready to give it a sufficient trial.

*Imports and Exports.*—The position of Germany as a manufacturing country is well shown by the fact that of its imports 59 per cent. are raw materials, and 8½ per cent manufactured goods, while of its exports 19 per cent are raw material, and 72 per cent manufactured goods. The special imports (that is, imports for home consumption) of Germany amount to about £300,000,000, and the special exports (that is, exports of domestic produce) to about £235,000,000. To the United Kingdom Germany sends total imports valued at over £32,000,000, of which the chief are refined sugar (about one-fourth), unrefined sugar (about £2,000,000), glass (over £1,000,000—chiefly flint and bottles), woollen manufactures (over £1,000,000), cotton manufactures, eggs, musical instruments, oats, toys and games, hewn timber, iron and steel manufactures, chemicals of all kinds, machinery of all kinds, and woollen yarn—all between £1,000,000 and £500,000, oil-seed cake, china and earthenware, starch, farina, and other farinaceous substances, sawn or split wood, leather, crude zinc, paper, raw hides, palm oil, raw coffee, hemp, fancy goods, mouldings for picture-frames, potatoes, wheat, gloves, joiner-work and other manufactures of wood, clover and grass seed, painters' colours, barley, linen manufactures, wrought metals of various kinds, staves, artificial manures, hardware (other than cutlery), copper (unwrought and part wrought), gutta, caoutchouc manufactures, caoutchouc, bristles, drugs, woollen rags (not for manure), cotton yarn, zinc manufactures, prints, engravings, and photographs, seed-oil and skins and furs—all between £500,000 and £100,000, and cordage, wool, blacking and polishes, tares, lentils, &c, linen yarn, pig-iron, glue, &c, mineral waters, beans, electrical goods, coal-tar dyes, unwrought steel, linseed, spirits, wine, pig and sheet lead, brooms and brushes, cement, boots and shoes, petroleum, and cocoa. From the United Kingdom Germany receives articles of British produce to the value of say £25,000,000 a year. The chief are coal (one eighth), cottons and woollen and worsted yarn (each over £2,000,000), machinery (including steam-engines), cotton yarn, herring, wrought and unwrought iron, and alpaca and mohair yarn—all between £1,600,000 and £1,000,000), woollens and worsteds, wool noils, &c, copper (wrought and unwrought), leather (wrought and unwrought), manure, chemical manufactures, linens, miscellaneous metals and metal manufactures, linen yarn, coal products, seed-oil, manufactures of caoutchouc, hardware, apparel and haberdashery, raw hides, painters' colours, and flocks and rag wool—all between

£900,000 and £100,000; and slates, oils (other than seed-oil), seeds (of all sorts), earthen and china ware, silk manufactures, grease, tallow, and animal fat, printed books, stationery, (other than paper), bladders, casings, and sausage-skins, drugs and medicines, paraffin wax, paper, and implements and tools. There is also a re-export of foreign and colonial merchandise of the total value of some £10,500,000. The chief articles are, wool (over 28 per cent), crutchbone, skins and furs, and coffee (all between £1,000,000 and £500,000), lard, tea, jute, cotton waste, leather, tallow and stearine, drugs, tin, ornamental feathers, raw hides, shells of all kinds, raw cotton, gums, hemp, copper (wrought and unwrought), and pepper—all between £500,000 and £100,000, and palm oil, straw-plait, pig and sheet lead, cocoa, bacon and hams, indigo, ivory, oil-nuts and kernels, machinery and millwork, chemical manufactures and rum. There is also a considerable amount of import into and export from Germany through Switzerland, Belgium, and Holland, but it is impossible to determine its amount.

Germany is the second commercial country in the world, the United Kingdom being first, the United States third, and France fourth. Of the total imports the United States sends about 17 per cent; Great Britain, under 14, Austria-Hungary, 12, Russia, 12, and France, over 5, while of the exports Great Britain takes over 19 per cent, Austria-Hungary, 10½, the United States, 9½, Holland, over 8, Russia, 6½, Switzerland, over 6, France, 5½, and Belgium, over 5. It is, however, characteristic of Germany that the remaining imports are received from, and the remaining exports sent to, over fifty different countries and states.

With attention and care, adaptability to market, and methods of pushing business such as have been already alluded to, British trade might be considerably extended. For example, in north-eastern Germany there are openings for makers of locks and keys, ivory-handled cutlery, ready-made boots and shoes of good quality, and, owing to the spread of interest in out-door games, for shoes adapted to the requirements of tennis, golf, cricket, &c. Individual efforts should be made even to calling on large consumers direct, and prices and sizes should always be quoted in German values, with the goods delivered c*if* and duty paid. In the north also there is a strong demand for "real English" cloth, which could be increased if dealers would despatch it in a similar way and in small lengths to suit customers. There is also a demand in various parts for iron ore, raw iron, tin-plate, chains, anchors, agricultural machines, textile machines, steam-engines, locomotives, locomobiles, bicycles, basic slag, toilet soap, and glass for photo-

graphic purposes (which the Germans have not yet taken up).

There are British consuls-general at Berlin, Frankfort-on-Main, Hamburg, and Leipzig; and consuls or vice-consuls at all leading commercial and industrial centres. Mercantile marine, nearly 2,000,000 tons, foreign trade, entered and cleared, 30,000,000 tons, coasting trade, over 8,000,000 tons.

The German protective tariff is heavy against all textiles, metal goods, &c., which can be manufactured in the country, and a fresh struggle is going on between the agricultural and manufacturing interests in what direction it is to be made heavier. The railways, too, differentiate against foreign goods by increased rates. Letter postage from the United Kingdom, 2½d per half-oz.; postcards, 1d., parcels, 1s per 3 lbs, money orders to and from; telegrams, 2d. per word, five mails from London each way every day.

*Money, &c.*—The standard is gold, but the monetary unit for business quotations is the mark, which is equal to between 11½d. and 1s. It is generally taken for ordinary purposes at the latter value. The mark is divided into 100 pfennige. The old thaler was equal to three marks.

The ordinary weights and measures are the meter or stab=1.09 yard or 39.37 in. (a yard is=91.4 centimeters, and an inch=2.54 centimeters), kilometer=0.621 of a mile, a German mile=7500 meters=4.66 British miles, square kilometer=0.386 sq mile, cub meter=1.308 cub yards, are=0.0247 acres, hectare=2.47 acres, gramme=15.433 grains, kilogramme=2.204 lbs avoirdupois, quintal or double centner=220.4 lbs avoirdupois, metric ton (coals)=2204 lbs, litre or kanne (liquid)=0.22 gallon, (grain)=0.027 bush. Generally in the last two cases use is made of the hectolitre, which is 100 times as much.

The German mercantile flag has three horizontal bars, the top one black, the middle white, and the bottom red. The naval ensign is a black St George's cross with white border, on a white ground, and the imperial eagle in a disc in the centre, while the top inner corner has the three bars as above, with across them a black Maltese cross with white border.

**Ghazipur**, a district in NW Provinces, India, with town of same name, where all the opium of the district is manufactured under government monopoly. Pop of town, 39,500.

**Ghenitchesk**, a port in the NW corner of the Sea of Azov, on a short branch of the Sebastopol railway. Exports wheat, barley, rye, and linseed, of a total trade of about 80,000 tons, about 40 per cent are British bottoms, navigation open from middle of April to end of October, but the fair-way is at times clear of ice all winter. British consular agent. Pop 2000.

**Ghent**, a river-port of Belgium, at the junction of the Lys and Scheldt, 34 m by rail N.W. of Brussels, connected by railways and canals with Ostend and Terneuzen, and the latter water-way, at present taking vessels of 17½ ft, is now being deepened to over 26 ft, the works to be finished by 1905 The largest dry dock is 426 ft long, with over 17½ ft. on sill Manufactures cotton yarn and tissues, linen (holland, &c), lace, sugar, leather, beer, &c Imports raw cotton, pig-iron, tin, copper, guano, chemicals, Russian flax, hemp, tow, yarns, wool, petroleum, machinery, manufactured goods, &c, exports these goods in transit, with hops, refined sugar, chicory, seeds, shoddy, linen, iron girders, glass and glass ware, manufactured stear, phosphates, paper, &c Of over 1,400,000 tons, entered and cleared, over 60 per cent are British Regular communication from London, Goole, Tyne, Hull, Bristol, Swansea, Manchester, Glasgow, and Leith. British vice-consul Pop 161,000

**Gibraltar**, a strong British fortress, and a port and coaling station, S Spain, at entrance to Mediterranean, trade with South Africa A rocky peninsula, 2½ m long, ¾ wide, and 1439 ft high, with a sandy plain to N only a few feet above sea-level Imports general goods, and exports from Spain wine, fruit, and cork, calling place for Mediterranean and eastern steamers Regular communication from London, Liverpool, Southampton, and Plymouth Distance from London, 1333 m, Plymouth, 1333, Liverpool, 1250, Glasgow, 1360 Mails from and to London daily, letters, 1d, post-cards, 1d, parcels, under 3 lbs, 1s, between 3 and 7, 2s., between 7 and 11, 3s, telegrams, 3½d a word, money orders exchanged, letters, 3 days 14 hours, parcels, 6 days Area, 1½ m Pop (exclusive of garrison of some 5300) 22,000 The Bay of Gibraltar on the W is about 8 m long and 5 wide, and has an extreme depth of 110 fathoms, and the Strait has a length of some 40 m, with a breadth varying from 8½ to 23, strong surface current from the Atlantic to the Mediterranean, and an under-current in the opposite direction.

**Gijon**, a seaport of N Spain, on Bay of Biscay, 20 m by rail N.E. of Oviedo, outer harbour, vessels of 17½ ft Imports machinery, cereals, iron and metal work, wood and furniture, pitch and tar, coffee, cocoa, artificial manures, oils, and nitrate of potash—total value over £700,000, of which United Kingdom sends about 33 per cent, and Germany, 22, exports manufactured zinc, hazel nuts, cider, apples, manganese, copper, blende, and quicksilver—total value about £120,000, of which the United Kingdom and France receive each about 40 per cent, Germany only 4 Of a tonnage of over 600,000, Britain has about 2 per cent., Germany, 2½, and Spain, 95 Regular communication from Glasgow British vice-consul Pop 43,500

**Gilbert Islands**, a group of British islands in the Pacific, on the equator, and between 172° and 177° E, seventeen coral atolls and a number of smaller islets Cocoa-nuts, copra, shark fins, and bêche-de-mer, probably pearl-shell exists, imports general goods Area, 166 m Pop 35,000

**Girgenti**, a town on the S coast of Sicily, Italy, 84 m. by rail S.S.E. of Palermo, centre of sulphur export, and has also trade in sumach, salt, and fish. British vice-consul Pop 25,000.

**Gironde**, the largest department of France, along the S.W. coast, West, low and with sand dunes, belongs to Landes region. Forests, salt, and oysters, but great wealth in vines—claret, Château Margaux, Château Lafite, and Château Latour, in Médoc district In the forest regions are manufactures of turpentine, pitch, and charcoal The department takes its name from the estuary of the Garonne and Dordogne, 50 m long, and from 2 to 6 wide. Area of department, 3761 m Pop 821,500

**Giurgevo**, a town of Roumania, on the left bank of the Danube, the port of Bucharest, from which it is 40 m. S.S.W. by rail, exports grain, salt, and petroleum Pop 18,000

**Gladbach**, a town of Rhenish Prussia, 16 m by rail W of Dusseldorf, with important cotton manufactures, dye-works, foundries, machine shops, breweries, &c Pop 69,500

**Glamorgan**, a coast county of S Wales, on the Bristol Channel, flat and fertile in S, hilly in N., drained by Tawe, Taff, Rhymney, &c Great coal-field (especially valuable for smelting and steamer purposes), with associated iron and limestone, smelting of iron (mostly imported ore, the native being difficult to deal with), copper, tin, and lead, seat of tin and zinc plate and nickel manufacture. Area, 516,959 acres Pop 860,022

**Glarus**, a canton of N.E. Switzerland, rising to a height of 11,887 ft., and drained by Linth Cotton and woollen manufactures, and cattle, green Schabzieger cheese, flavoured with mehlot, powdered and pressed in moulds, slate Area, 267 m Pop 32,500

**Glasgow**, the great industrial centre of Scotland, and the second city in population of Great Britain, in S.W., on both banks of the Clyde, 14 m up from the beginning of the firth at Dumbarton, 47 m by rail W of Edinburgh, and 402 N.W. by N of London, 152 S.W. of Aberdeen, 207 S of Inverness, and with canal communication (see Forth and Clyde Canal) The river channel and harbour are kept in order by constant dredging, so that there is a depth in the former of 26 ft at high water of ordinary spring tides, and in the latter of up to 39 ft There are, besides the river harbour, three great tidal basins, the total extent of quays being 8½ m, with 206 acres of water space, 158 acres of yards, sheds, quay area, &c., and cranes lifting from 1½ to 150 tons. There are three graving docks belonging to the

Clyde Trust (the harbour and river authority), with lengths of from 551 to 880 ft, and depths on sill varying from 22½ to 26½ ft, as well as dry docks and patent slips belonging to private firms. The commerce is enormous and world-wide, so that the imports embrace practically almost all the articles that come to the United Kingdom. Special mention may be made of grain and flour, cattle, beef, tinned meats, fish, &c; lumber and wood, fruit, ore, cheese, cotton, petroleum, and general "notions," from Canada and the United States; wool and preserved meat, &c, from Australia and New Zealand; sugar, rum, mahogany, &c, from the West Indies; grain and cotton from Russia and Egypt; jute, cotton, teas, spices, teak, &c, from India; grain, flour, and wine, from Austria-Hungary; ore and fruit from Spain; wine from Portugal and France; palm-oil and ivory from Africa; tea from China, and vegetables and live stock from Ireland. The exports, coal, iron, general goods, and the products of all the industries of the city and neighbourhood, are sent to every part of the world, there being regular communication with all the leading Scottish, English, and Irish ports, the West Highlands and Hebrides, the N of Spain, Portugal, Mediterranean and Black Sea ports, and all the chief and many of the minor ports of Canada, the United States, Central and South America, Australia and New Zealand, South Africa, India, Japan, China, and the East and West India Islands. Nearly 500 sailing vessels of some 450,000 tons, and over 1100 steamers of some 1,120,000 tons, are registered as belonging to the port; and of the steamers about 70 are over 3000 tons. Some 60 sailing ships and nearly 1900 steamers are between 2000 and 3000 tons, and 1700 sailing ships and 1800 steamers between 1000 and 2000 tons. The vessels entered and cleared for overseas trade were about 100 British sailing vessels, of some 90,000 tons, 60 foreign sailing vessels, of some 40,000 tons; 1900 British steam vessels, of over 3,000,000 tons, and 500 foreign steam vessels of nearly 500,000 tons, besides a general coasting trade of over 13,000 arrivals and departures of over 2,500,000 tons, and 5700 arrivals and departures of over 1,100,000 tons carrying on communication with Ireland. The total value of imports is some £14,000,000

£500,000, butter, cement, miscellaneous chemical manufactures and products, manufactured cork, beans, oatmeal and groats; rice and rice-meal, &c; glass manufactures, miscellaneous raw fruits, hair, hay, nitrate of soda, other artificial manures, beef, pig and puddled iron, iron and copper pyrites, oil (fish, train, or blubber), oil-seed cake, paper-making materials, paraffin, petroleum, glucose, furniture woods, and raw wool, all between £50,000 and £100,000; and grapes, glue, &c, raw hides, tools, copper regulus and precipitate, old iron, olive-oil, seed-oil, oleo-margarine, painters' colours, rosin, clover and grass seed, flax or linseed, goatskins (undressed), soap and powder, brandy, molasses, raw vegetables, and woollen yarn, all between £20,000 and £50,000. The total value of exports of British and Irish produce is about £18,000,000, the chief exports being cotton goods, machinery, iron and iron and steel manufactures, ships, and British spirits, all over £1,000,000, coal, cotton yarn, jute manufactures and yarn, linen manufactures and yarn, and miscellaneous unenumerated goods, all between £500,000 and £1,000,000, apparel, beer and ale, railway carriages, chemical products, coal products, manure, oil, painters' colours and materials, paper, provisions, wool, woollen and worsted manufactures, all between £100,000 and £500,000, cordage, earthen and china ware, fish, flax and hemp, glass, oil and floor cloth, and umbrellas, &c, all between £50,000 and £100,000, and haberdashery and millinery, jams, &c, and pickles and sauces, &c, all between £20,000 and £50,000. Of foreign and colonial merchandise there is a small export of about £400,000, of which rice and rice-meal, &c, sewing-machines, and undressed goatskins are the only articles that have a value of over £20,000. The great industry is ship-building, the output being the most valuable in the world, and in variety of other manufactures Glasgow is surpassed in the United Kingdom only by London. The chief are connected with cotton, silk, wool (carpets, &c), and jute, spinning and weaving; printing, bleaching, dyeing, and calendering works; making of machinery, boilers, iron pipes, girders, and iron ware; iron smelting, chemical works of different kinds, bread and biscuit making, boot and shoe factories, glass, millinery, and many others.

m. by rail W of Chemnitz, woollens (carpets, &c), print and dye-works, machinery, iron-founding, &c Pop 26,000

Glossop, a town of Derbyshire, England, 13 m by rail E S E of Manchester, in coal district, with important cotton manufacture, woollens, paper, dyeing, bleaching, and print works, and iron foundries Pop 21,526

Gloucester, a county with a town of the same name in W midland England, hilly in E, rising to a height of 1134 ft in Cotswolds, low and flat along both sides of Severn, other rivers, Avon, Wye, and upper waters of Thames (Coln and Churn), coal in Forest of Dean and at Bristol, iron ore and smelting in Forest of Dean; pastures with sheep and cattle, making of cheese (Vale of Berkeley), orchards with apples for cider, manufactures of woollens (broadcloths, &c), hosiery, &c The town, 114 m by rail N W of London, 38 m N N E of Bristol, and 55 S S W of Birmingham, is at the head of sea-going navigation on the Severn, vessels proceeding up the Gloucester and Berkeley Canal, 17 m long and 15 ft deep, which takes craft up to 600 tons The manufactures of chemicals, soap, matches, railway waggons, agricultural implements, &c, are not important, but there is a considerable amount of commerce, the tonnage, entered and cleared, in over-sea trade being over 300,000 tons, besides a coasting trade of some 700,000 tons The chief imports are refined sugar, wood (sawn and hewn), wheat, maize, barley, oats, crude zinc and other ores, cotton seed, and flax or linseed Chief exports, iron and iron and steel manufactures, and salt Area of county, 795,734 acres Pop 634,666, pop of town, 47,943

Gloucester, a port of Massachusetts, 28 m by rail N N E of Boston, harbour 16 to 22 ft; great cod and mackerel fishing, granite, anchors, and rails, imports salt, coal, and lumber Pop 26,500

Gmund, a town of Wurtemberg, Germany, 29 m by rail E of Stuttgart, gold and silver jewellery, wood-carving, hops, and fruit Pop 19,000

Goa, a district on the W coast of India belonging to Portugal, 250 m S of Bombay, one-sixth under rice, another sixth under forest (teak, &c), production also of fruit, pepper, cinnamon, and medicinal plants, salt and iron, trade, mainly transit, is in salt, pulse, and grain There are many rivers, on one of which, the Mandovi 3 m from its mouth, stands the capital Goa, or Panjun, with a population of 3000 British consul Area of district, 1390 m Pop 495,000

Gold Coast, a British crown colony and protectorate, W Africa, extending 350 m along the Gulf of Guinea, from about 5° W to 2° E, between the French Soudan (Ivory Coast) and Togoland The coast lands are flat, damp,

unhealthy, and dangerous of approach owing to the high surf The surface rises towards the interior and is covered with tangled forest, alluvial and quartz gold are found, but the more valuable exports are india-rubber (mostly sent to United Kingdom, a little to Germany), palm oil and kernels, mahogany and other valuable timber, kola-nuts and cocoa The chief imports are general goods, guns, and powder The gold dust is weighed by tekus and ackies (6 tekus=1 ackie=one sixteenth oz Troy) Of imports of about £1,200,000 the British Empire has some 76 per cent; and of exports of £900,000 the British Empire receives some 63 per cent Postage, 1d per half-oz, postcards, 1d, parcels, not over 3 lbs, 1s, between 3 and 7, 2s, between 7 and 11, 3s, money orders to and from, telegrams, 5s 7d to 5s 9d a word, mails from London every week or oftener Regular communication from London, Southampton, and Plymouth (See Accra.) Area of colony, exclusive of Adansi and Ashanteeland, 40,000 m Estimated pop 1,500,000

Goodwin Sands, quicksands lying from 5 to 7 m off the E coast of Kent, England, and extending from off the N Foreland to off the S Foreland, 10 m in length by 1½ in breadth, partly dry at low water, guarded by four lightships, with lights visible for 10 m in clear weather, and by nine buoys

Goole, a river port of the W Riding of Yorkshire, England, at the junction of the Don and the Ouse, 27 m above Hull, and 22 m by rail S S E of York, vessels drawing up to 18½ ft can reach the port at spring tides, large docks with trade of over 1,100,000 tons entered and cleared, besides a coast trade of over 600,000 tons Imports, £5,500,000, exports, £6,750,000 Imports butter, chemical manufactures, clocks, cordage, grain, cotton yarn and manufactures, aniline dyes, logwood, farinaceous substances, flax, fruit (cherries, plums, &c), glass, raw hides, linen and linen yarn, iron, copper, zinc, condensed milk, olive- and palm-oil, paper (strawboard, &c), silk, refined sugar, unmanufactured tobacco, toys and games, potatoes and raw vegetables, wine, wool, wool yarn, mohair manufactures, rags for the manufacture of shoddy, and yeast, exports horses, caoutchouc manufactures, chemical products, coal, coal products, cotton manufactures and yarns, earthen and china ware, hardware and cutlery, tools, leather and leather goods, linen manufactures and yarn, machinery, iron and iron and steel manufactures, oil- and floor-cloth, wool, woollen and worsted manufactures, and woollen and worsted yarn, besides a transit export of cotton waste and hams Pop 16,576

Gorgonzola, a district of Lombardy, Italy, 12 m N E of Milan, celebrated for cheese

Görlitz, a town of Silesia, Prussia, on the

Neisse, 25 m E of Bautzen, woollen manufactures, and also weaving of cotton and linen. Pop 81,000

Gota Canal, a canal joining the Gota River in S Sweden (by Lake Wener and Lake Wetter), with the Gulf of Bothnia; canal 47 m long (but total distance 235 m.), with depth of 10 ft.

Gothenburg, or Göteborg, a port of Sweden, at the mouth of the Gota, 281 m by rail S W. of Stockholm; good harbour; vessels up to 20 ft. can lie at quays Ship-building, pig and rolled iron, textiles, matches, paper, wood-pulp, herring fishing Imports coal, iron, petroleum, machinery, grain (except oats), salt, silk, cotton and woollen goods, &c, exports wood of all kinds (deals, boards, joinery, laths, pit-props, sleepers), turners' goods, butter, oats, bottles, iron and steel (bar and pig), wood-pulp, bobbins, zinc, paper, matches, and cotton and woollen yarns and fabrics Of about 2,400,000 tons, entered and cleared, some 18 per cent are British Regular communication from London, Tyne, Hull, Grimsby, Manchester, Granton, and Glasgow Distance from London, 609 m, Leith, 570, Liverpool, 960, Tyne, 460 Letters, 2 days; parcels 2½ British consul Pop 131,000

Gouda, a town of Holland, 13 m by rail N E of Rotterdam, clay pipes, exports butter and cheese. Pop 22,600

Goulburn, a left bank tributary of the Murray River, Victoria, Australia, with gold-fields on upper portion, and much used for systematic irrigation

Govan, a burgh on the Clyde, with a population of 82,174, but industrially and commercially a ship-building and engineering portion of Glasgow

Goyaz, the central state of Brazil, along rivers Tocantins, Araguaya, and Parana-hyba, gold, iron, diamonds, mica, and chrome Area, 288,470 m Pop 228,000

Graaf Reinet, a district with a town of the same name in central S Cape Colony, good irrigation, angora goats, vines, gardens, and fruit, town 184 m by rail S W of Port Elizabeth. Pop 6000

Grahamstown, a town in S E Cape Colony, 106 m by rail N E of Port Elizabeth, and 43 N W of Port Alfred, chief town in the E of the colony; dairy-farming and cheese Pop 10,500

Grand Canal, in Ireland, connecting Dublin with Shannon, with branches along the W side of Shannon, 14 m to Ballinasloe, and to the Barrow at Athy, 28½ m, length of trunk line, 79 m, takes barges of 4½ ft draught

Grand Junction Canal, a trunk line from Brentford on the Thames above London, to Northamptonshire, where at Braunston, near Rugby, it joins the Oxford Canal, and so establishes communication with the Coventry and Birmingham Canals and the Trent There

are branches on the W to Slough, Wendover, Aylesbury, and Buckingham, from Paddington to the Regent's Canal; and from Blisworth to Northampton and the Nen, trunk 93 m, total, 110, barges of 3 ft draught only

Grand Rapids, a town in Michigan, United States, on the navigable Grand River, 40 m up from Lake Michigan, and 130 m N N E of Chicago, flour-mills, gypsum, bricks, agricultural implements, carpet sweepers Pop 88,000

Grangemouth, a port of Stirlingshire, Scotland, at the Forth entrance of the Forth and Clyde Canal, 24 m E N E of Falkirk, entrance to new dock 24 ft at high water, impossible to enter at low water of spring tides Imports sugar, hewn and sawn timber, aniline dyes, margarine, paper-making materials, paper and strawboard, iron manufactures, iron (pig and puddled), oil (fish, train, or blubber), painters' colours, chemicals and chemical products, cotton manufactures, raw hides, zinc, exports coal and coal products, machinery, iron and other metals, iron and steel manufactures, cotton goods, manure, and sugar and molasses. Pop 8386

Grantham, a town of Lincolnshire, England, on the left bank of the Witham, 26 m by rail S S W. of Lincoln, and connected by canal (30 m) with Trent, near Nottingham, iron in neighbourhood, agricultural implements; bricks, paper Pop 17,593

Granton, a port of Mid-Lothian, on the S. side of Firth of Forth, 3 m N N W of Edinburgh, 13½ ft at entrance at low water of spring tides, with 23 ft at berths, rise at neaps of 9 ft, and at springs of 16½ ft, fishing centre Imports (total £730,000), paper-making materials and paper (including strawboard), timber, butter, barley, maize, matches, and glass manufactures, exports (total £230,000), coal, cottons, machinery, and spirits Pop 1700

Granville, a French seaport on the Channel, department of Manche, 23 m N E of St Malo; depth at entrance, 16 to 32 ft, ship-building, leather, chemicals, iron ware, and brandy. Imports coal, iron, lumber, artificial manures, tar, hemp, exports butter, eggs, fruit, cider, mistletoe, oysters, salt fish, &c Pop 12,000

Gratz, or Graz, the chief town of Styria, Austria-Hungary, 141 m by rail S S W of Vienna, steel goods, machinery, railway plant, sugar, wine, soap, candles Pop 138,000

Gravesend, a calling place for ships on Thames, Kent, England, 24 m down from London, pilot and custom-house station for ships going up or down the river Pop 27,175

Great Barrier Reef See Australia

Great Basin, a great plateau and area of inland drainage in the S W of the United States, with the Sierra Nevada on the W, and the Wahsatch Mountains on the E Roughly triangular in shape, it has a width across the

N. of about 500 m, a N and S extent of some 800 m, narrowing to the S, and covers almost the whole of Nevada, the western part of Utah, and portions of Oregon, California, and Idaho. The average elevation is 4000 to 5000 ft, and rising above this are a number of mountain masses and ranges (most of them running N and S), reaching an additional height of 1000 to 6000 ft. There is a rainfall of from 4 to 15 in, and the great flats are covered with nitrate of soda and other salt deposits, several inches thick. The soil is, however, very fertile, and yields good crops along the banks of the streams, and wherever it can be irrigated. There are a number of salt lakes, of which the chief are Great Salt Lake (80 m by 32, and 10 to 50 ft deep—three times as salt as the sea), Lake Utah, and the Humboldt and Carson Sinks. Soda Lake and Death Valley are great depressions, with their bottoms so much below the general surface as to be beneath sea-level.

**Great Britain—Surface and Size.**—A large island (the largest of the continent), off the centre of the W coast of Europe, consisting of the two countries of Scotland and England and Wales, lying between 49° 57' and 58° 40' N, and between 1° 46' E and 6° 13' W, and bounded N by the Atlantic, E by the North Sea, S by the English Channel, and W by the Atlantic, the North Channel, the Irish Sea, and St George's Channel. The most northerly point of the mainland is Dunnet Head, in Caithness, the most easterly Lowestoft Ness, in Suffolk, the most southerly Lizard Point, in Cornwall, and the most westerly Ardnamurchan Point, in Argyllshire. Off the N coast are the Orkney and Shetland Islands, off the NW coast the Hebrides, off the W coast the Isle of Man and Ireland, and to the S of the English Channel, on the French coast, between the peninsulas of Cotentin and Brittany, the Channel Islands. A rise of 300 ft. would unite the whole of the islands, except the Outer Hebrides, with one another and with the Continent. The greatest length of the mainland from N to S (from Dunnet Head to Start Point, in Devonshire) is about 605 m, its greatest breadth, from Land's End to the North Foreland, about 320, the least, between the firths of Forth and Clyde, about 40, and the area, 88,321 m.

**Government, &c.**—The island forms with Ireland the United Kingdom of Great Britain and Ireland—generally spoken of as the United Kingdom. Technically, the Isle of Man and the Channel Islands are regarded as appanages of the Crown and outwith the United Kingdom. The government is a constitutional monarchy, the supreme legislative power being vested in Parliament, which consists of a House of Lords and a House of Commons, and meets every year, the session lasting from about the middle of February to the middle of August, with an

occasional autumn session in October and November. A parliament, unless dissolved sooner, may last for seven years, but no longer. The House of Lords consists of about 600 members, the majority of whom have their seats in virtue of descent from former holders of titles. Others hold by creation of the sovereign (the first of a hereditary line, or holding for their own life only), in right of their office—the archbishops and bishops of the older English sees (21), by election for life (28 Irish representative peers), or by election for the duration of the parliament (16 Scottish representative peers). The House of Commons consists of 670 members—377 for counties, 284 for boroughs in England and Ireland and burghs in Scotland, and 9 for universities. Except in the election of university members voting is by ballot, the size of the constituencies varies very much, and the voters are all householders, and such lodgers as occupy separately rooms having a certain annual value. The total population is about 41,005,500, of whom the electors number about one-sixth. The executive power lies nominally with the Crown, but is in reality exercised by a committee of the royal ministers chosen from the party having a majority in the House of Commons for the time being. These, selected from both Houses, form the Cabinet, and their chief is styled the Prime Minister, though, curiously enough, neither title nor office is recognised by the constitution of the country. The normal income and expenditure of the state are about £110,000,000.

The average density of the population of the United Kingdom is 344, of Great Britain alone (pop 36,998,178), 420, but in the manufacturing districts it, of course, rises very much higher, being in the area round London, on all the coal-fields, about Dublin, and about Belfast, between 500 and 600, while on the other hand in large districts in the N and NW of Scotland, along the border country between Scotland and England, in the N of England, and along the W of Wales, the average density is below 50. Of the whole population over 74 per cent are in England, over 4 in Wales, nearly 10.8 in Scotland, and over 10.7 in Ireland.

It is most convenient to deal with many of the details of the different countries making up the United Kingdom in the separate articles on England, Scotland, Ireland, &c., and to these reference may be made for the physical features, communications, resources, productions, manufactures, industries, &c., while there remain to be dealt with here certain points connected with commerce, shipping, &c., which can only be fairly considered with reference to the kingdom as a whole.

Great Britain is, by position, resources, climate, and the character of the people, particularly fitted for carrying on a most extensive

commerce Situated almost in the centre of the land surface of the world, with a long coastline, sea access on all sides, suitable positions for harbours, short distance between the E and W coasts, and convenient lines of communication, it has become naturally the point of interchange of all transit traffic. When to this is added its extensive deposits of coal and iron (and these so often found together, and along with limestone for smelting), there is also present the industrial importance and wealth arising from the receipt of raw material from every quarter of the globe, and its conversion into finished goods, which are in turn exported to all parts of the world. The people are energetic and persevering, and the climate is suitable for industries of all kinds, with a fairly high mean temperature, and a well-distributed rainfall, so that labour may be carried on with but little interruption practically all day long and all the year round. The charge that we have, of recent years, lagged in the race of industrial progress is probably to a considerable extent true, and some of the causes of the falling off (the development of rich iron and coal-fields in other countries, &c) cannot be at all helped, and can only be clearly recognised, so that the changed condition may be faced. Others, however, can probably be met and overcome. For instance, we are told that the long time required to execute orders, delays in giving delivery, and the unnecessarily high prices asked, are frequent causes of orders that might naturally be executed in this country being placed abroad, in America, Germany, and elsewhere. This is undoubtedly true, and so far as it points to the fact that the hands of British manufacturers must be full, when they cannot meet the wishes of would-be customers with regard to speed and promptness, or that they decline to sacrifice finish and thorough workmanship to haste and cheapness, it is not altogether matter of regret; but the danger lies in the circumstance that orders are apt to follow orders, and while bad workmanship and rough finish are matters that will remedy themselves by the disappearance of demand for goods in which they show themselves, yet quickness and promptness of delivery will keep the market. Can the necessity for these not be met by greater attention to labour-saving apparatus, and more sensible rules among the workmen in regard to the working of machinery, and otherwise, so that the absurd one man one machine policy, and the alledged "ca' canny" spirit may become things of the past, and one man, and not always a skilled hand at that, may, as in America, tend as many machines as he possibly can, and the endeavour of every man may be to get through as much work as possible so that prices may be proportionately less. "There is a widespread feeling," says an American consul in a busy

industrial centre of England, "among working people (in Great Britain) that they owe it to themselves not to exceed a certain amount of labour. Many workmen deem it a duty to themselves and their fellow-workmen to make a job last as long as possible. Although there is a greater division of labour in America, yet oftentimes twice as many are required in England to do a certain job as would be required in America, as each man is very jealous lest a workman in another allied trade should do the smallest piece of work which the rules of his trade say should be done by him, and him alone. As a rule, the British workman is not as adaptable as the American workman. It is not the custom of the country for an Englishman, whether mechanic, clerk, or labourer, to work as hard as an American." The British consul in Chicago says much the same of earnest American purpose, though he puts it differently. If there be truth here then it is something to be laid to heart. In adaptability to the wishes of customers too (in this case not on the part of the men, but of the masters), and the pushing of goods by commercial travellers or local agents, we have been charged with lacking the necessary up-to-date ideas of the age, and here again there is no doubt things may be much improved. On all hands the tale is told, and the undoubted remedy is the training of a body of young men in the United Kingdom, who with speaking knowledge of foreign tongues, and thorough mastery of the details of the business they represent, will, by personal attention to things on the spot, in every part of the world, be able to ascertain clearly what customers want (whether their desires—say as to colours, patterns, &c—may seem mere whim or prejudice, or whether—say as to the design and weight of tools or implements—they may be necessary owing to peculiar local circumstances), and to advise what is needed to meet the demands, as far as possible, of each different place. They would also be able to foresee, and to prepare to meet any special temporary demand for some particular line of goods, and so enable their employers to take full advantage of the passing opportunity.

Great Britain has, as has been already said, great facilities for trade through easy sea access and good harbours. The coast-line of some 5500 m is broken by many large and important openings, of which the chief along the E coast from N to S are the Moray Firth (with the Dornoch, Cromarty, and Beaulie Firths opening off it), the mouths of the Dee and South Esk, the Firth of Tay, the Firth of Forth, the mouths of the Tyne and Tees, the Humber, the mouths of the Orwell, the Stour, and the Thames. The Wash is too shallow to be of use for commercial purposes. On the S coast are Spithead, the Solent, Southampton Water, and Plymouth Sound; and on the W coast are the Clyde, the

Solway, the Mersey, the Dee, Milford Haven, and the Bristol Channel and Severn. There are many openings also in the N.W. of Scotland, and in the W. of Ireland, but these are not of importance, meanwhile at least, owing to the poor nature of the country behind them, and the absence of coal, and consequently of industries, &c. On the N. coast of Ireland is Loch Foyle, on the E., Belfast Lough, Carlingford Lough, Dundalk Bay, Dublin Bay, and Wexford Harbour, and on the S., Waterford Harbour, Youghal Harbour, and Cork Harbour. The coast-line of Ireland is probably about 2200 m. This extended coast with its many harbours is well suited for the nurture and training of fishermen and sailors, and so we find the fish landed in the United Kingdom valued at over £9,500,000, which is far above the value of the fisheries of any other country in the world. France and Canada come next, the former with somewhat more, and the latter with somewhat less than half of the amount named, and Norway, Portugal, and Denmark follow next, but far behind. Nearly half the value is for herring and haddock.

Great Britain is a free-trade country, import duties being levied only on chicory, cocoa, coffee, dried fruits, grain and flour, spirits and beer, sugar, tea, tobacco, and wine, and there is an export duty on coal. The duty-free articles make up 76 per cent. of the total value of imports.

The imports of the United Kingdom amount to some £520,000,000 annually (though, of course, such large figures fluctuate considerably from year to year), of which over 90 per cent. come to England and Wales, about 7½ to Scotland, and a little over 2 to Ireland. Of the total the United States sends over 25 per cent., and France follows with over 10. From Australasia, Germany, and Holland we receive goods to the value of over £30,000,000, India, Belgium, British North America, and Russia send to the value of between 20 and 30 millions, Spain, Egypt, Argentina, Denmark, and Sweden between 10 and 20, the Straits Settlements, South and East Africa, Ceylon, Brazil, Turkey, and Norway between 5 and 10, and Chile, West Africa, China, Italy, Portugal, Greece, Hong-Kong, the British West Indies, the Channel Islands, Roumania, Japan, Austria-Hungary, Peru, and the Philippines between 1 and 5. The most valuable imports for trade are cotton, wool, flax, jute, &c. Of the first of these the annual import is over 1,830,000,000 lbs., and of this some 88 per cent., with a value of over £36,000,000, is reserved for home consumption, the value of the goods (piece-goods and yarn) produced is estimated at £100,000,000, of that exported at over £70,000,000. Of the second the import is over 600,000,000 lbs., of which about 60 per cent., valued at over £13,000,000, is retained for home consump-

tion, the goods produced are valued at £50,000,000, and those exported at over £21,000,000. Of flax nearly 200,000,000 lbs. are used (85 per cent. of it imported), the goods produced from which are valued at £20,000,000, and the export at £6,000,000. In addition there are exports of apparel and haberdashery, manufactured from these, valued at about £7,000,000, and large imports of hemp, jute, &c., and exports of goods manufactured from them, those of jute alone valued at over £2,500,000. Of the imports the largest value is in grain and flour, about 11 per cent. (chiefly from the United States, Canada, Argentina, Australasia, India, Russia, Turkey, and Roumania); raw cotton (United States, Egypt, India, Brazil, and Peru); wool (Australasia, Cape of Good Hope, Argentina, India, Turkey, France, Belgium, Peru, Uruguay), dead meat (United States, Australasia, Canada, Denmark, Argentina, Belgium, Holland), wood and timber (Russia, Sweden, Norway, Canada, United States, Western Australia), butter (Denmark, Australasia, Canada, France, Holland, Russia, Sweden, and Norway); margarine (Holland); sugar (Germany, Holland, France, Belgium), silk manufactures (France, Holland, Belgium, Japan), woollen manufactures and yarn (France, Belgium, Holland, Germany), flax (Russia, Belgium), hemp (Philippine and Ladrone Islands), jute (Bengal); oils, tca (India and Ceylon), animals for food (United States and Canada, Argentina, also, in the past, and, it is to be hoped, soon again in the future); fruit (Spain, Canada, Australia, Canary Islands), leather, &c. (United States, India, Australasia), seeds (Egypt, India, Argentina), chemicals, dye-stuffs, &c., cheese (Canada and United States), iron manufactures (Belgium, Holland, United States, Germany); eggs (Russia, Denmark, Germany, Belgium, France), lard (United States), wine (France, Portugal, Spain), copper ore (Spain, United States, Chile, Peru, and South Africa); unwrought copper (United States, Chile, Victoria, and New South Wales), iron ore (Spain); machinery (United States), lead (Spain, Australia, United States); tin (Straits Settlements), tobacco (United States), coffee, currants (Greece), raisins (Spain and Turkey); iron—pig, puddled, bar, &c., unwrought steel (Holland), zinc and its manufactures (Holland and Germany).

Of the total import over £11,000,000 are paid for living animals, over £210,000,000 for food-stuffs, &c., about £156,000,000 for raw materials, some £38,500,000 for articles requiring further process of manufacture before being used, and over £104,000,000 for manufactured articles.

The imports of gold bullion amount to about £20,000,000, chiefly from South Africa, Australasia, the United States, and India; and of silver bullion to £11,000,000, chiefly from the

United States The export of gold varies greatly (from 7 to 21 millions within five years), but the largest amounts go to Germany, the United States, India, and France; of silver the amount averages over £11,000,000, mainly to India, China, and France

The exports of home produce amount to some £280,000,000, of which over 90 per cent. are sent from England and Wales, and over 9 per cent. from Scotland Of the total 11 per cent. goes to India, and next to that Australasia and Germany take each about 9½ per cent. To France and the United States we send goods valued at between 15 and 20 millions; to South and East Africa, Russia, Holland, and Belgium, between 10 and 15; to Japan, Italy, British North America, Argentina, Egypt, Spain, China, Brazil, Sweden, and Turkey, between 5 and 10, and to Denmark, Norway, Chile, the Straits Settlements, Portugal, Java, Austria-Hungary, Hong-Kong, West Africa, Greece, Foreign West Africa, Uruguay, Mexico, the Philippines, British West Indies, Ceylon, and Malta, between 1 and 5 The export values of the textiles and cognate articles have been already dealt with, for cotton yarn and twist the chief customer is India, and most piece-goods go to India, Turkey, Germany, Holland, Belgium, Java, the United States, Australasia, and Africa The woollens and worsteds go in largest quantity to Germany, Russia, France, Canada, and Australia, the linen and jute to the United States, and the apparel and haberdashery to South Africa, Australasia, and Canada Other important articles of export are coal, cinders, and fuel, about 10 per cent of the whole (largely to France, Italy, Germany, Norway and Sweden, Russia, Denmark, Egypt, Spain, Argentina, Brazil, India, and South Africa), machinery about 6 per cent (Australasia, India, Russia, Germany, France, Belgium, Holland, Italy, Argentina, Japan, and South Africa), ships (Japan, Germany, Austria-Hungary, Norway, and Holland); chemicals (France, Italy, United States, Australasia), iron and steel of all kinds, over 10 per cent, hardware and cutlery, and copper There is also a transit trade of colonial and foreign merchandise of an annual value of some £65,000,000, of which the most important items are caoutchouc passed on to Russia, Germany, the United States, and France, raw cotton (Russia and United States), hemp (United States), jute (France, Belgium, Germany, Holland), jute yarn (United States), lace (United States), coffee (Germany, Holland, Austria-Hungary), leather (Holland), unwrought copper (United States), skins and furs (United States, Germany, and France), tallow and stearine (Russia, Holland, and Germany), tea (Germany), and wool (sheep, or lambs)—France, Germany, Belgium, Holland, United States.

Of the exports of home produce nearly £1,000,000 are received for living animals, over £15,000,000 for food-stuffs, &c., over £43,500,000 for raw materials, nearly £36,000,000 for articles requiring further process of manufacture before use, and nearly £192,500,000 for manufactured articles, while goods valued at nearly £3,000,000 are sent away by parcel-post. It must always be remembered, however, in the case of both imports and exports that the country given is the place where the goods were put on board ship or are to be landed, and that this may in either case be merely a transit source or destination For example, goods to or from Germany may pass through Belgium or Holland; to or from Switzerland by France, Belgium, Holland, and Italy, to or from Austria-Hungary by Germany; goods intended for Canada may go through the United States, and goods for the United States may go through Canada, while Hamburg, Rotterdam, and Antwerp are practically depôts for all the world. No figures are published, or indeed can very well be published, which would enable any true conclusion on these points to be arrived at

The total number of ships belonging to the United Kingdom is about 20,000, with a tonnage of over 9,600,000, of which fewer than half the number of vessels, but 77½ per cent of the tonnage, are steamers The sea-going tonnage of the world being probably about 21,000,000 tons, this gives the United Kingdom over 44 per cent of the total, if the colonial tonnage be added (about 1,500,000 tons) the percentage of the Empire is 51 per cent, Germany and the United States come next with over 9 per cent, Norway with over 7, France with 4½, Italy with over 4, Japan with 3½, Spain with over 3, and Russia with under 3, Holland with 1½, and Austria-Hungary with 1 The clearances in the foreign trade are about 50,000,000 tons, and in the coasting trade nearly 55,000,000

Great Britain has the largest import and export trade in the world, Germany coming second, the United States third, and France fourth Of the world production of coal (say 800,000,000 tons) the British Empire has a little less than one-third, of gold it has nearly half the supply, of lead (thanks to Australia) one-fifth, of silver one-ninth, of tin five-eighths, one-eighth of the iron, one-ninth of the copper, and one-quarter of the salt

The *British Empire*, of which the United Kingdom is the mother country, is of enormous extent, covering one-fifth of the land surface of the globe, while the British Islands cover only about the one-sixteen-hundredth It is made up of the United Kingdom itself with India, and colonies, protectorates, and dependencies, all over the world These are in Europe, Gibraltar, and Malta and Gozo, &c., in Asia,

Aden with Perim, Socotra, and the Kuria Muria Islands; Bahrein Islands, British Borneo, Ceylon, Cyprus, Hong-Kong; Baluchistan, Sikkim, and the Andaman, Nicobar, and Laccadive Islands (all dependencies of, or attached to India), Labuan, the Straits Settlements, the Federated Malay States, and Wei-hai-wei; in Africa, Ascension, Basutoland, Bechuanaland, Cape Colony, British Central Africa, British East Africa, Mauritius, Natal, Nigeria, Orange River Colony, Rhodesia, St. Helena, Seychelles, Somaliland, Transvaal, and the West African colonies (Gold Coast, Lagos, Gambia, and Sierra Leone); in America, the Bermudas, the Dominion of Canada, Falkland Islands, British Guiana, British Honduras, Newfoundland and Labrador, the West Indies—Bahamas, Barbadoes, Jamaica, with Turks Islands, Leeward Islands, Trinidad and Tobago, and Windward Islands; in Australasia, the commonwealth of Australia, British New Guinea, New Zealand, Fiji, and the Friendly, Cook, Ducie, Pitcairn, Manihiki, Savarof, Dudozi, Victoria, Tokelan, Phoenix, Ellice, Gilbert, British Solomon, Santa Cruz, Wilson, Starbuck, Malden, Jarvis, Christmas, Fanning, Washington, Palmyra, and Baker Islands, in the Pacific. The total area is over 11,000,000 m. and the population is, probably, 397,000,000, of whom 49,000,000 are British or of British descent, about 4,000,000 Europeans other than British, and the remainder Asiatics, negroes, &c.

**Greece.—Situation and Size.**—Greece is a small kingdom of S. Europe, with a mainland portion at the extremity of the Balkan Peninsula, and a large number of islands—Euboea and the Northern Sporades on the N.E., the Cyclades on the S.E., Cerigo on the S., and the Ionian Islands on the W. It is bounded N. by Turkey, E. by the Aegean Sea, S. by the Mediterranean, W. by the Ionian Sea, and is almost cut in two by the Gulf of Ægina, entering on the E., and the Gulf of Patras and the Gulf of Corinth, entering from the W. (see Corinth). The part to the S. is the Morea or Peloponnesus. The mainland portion lies between 36° 40' and 40° N., and between 20½° and 24° 10' E., and has an extreme length from N. to S. of 250 m., a breadth from E. to W. of 170 m., and a total area of 25,014 m., of which 4149 are in the islands. Owing to the winding character of the sea boundary, and the many large gulfs, the coast-line is very long. Of the inlets the chief, besides those already mentioned, are the Gulf of Volo, and the Gulf of Lamia or Zituni. in the N.E., the Gulf of Nauplia or Argos (S.E. of Morea); Gulfs of Laconia and Messenia (S. of Morea); the Gulf of Arcadia (W. of Morea), and the Gulf of Arta, in the N.W. The coasts are high and rocky, and the surface mountainous, except in the N. (the plain of Thessaly), the centre of the E. (the plains of Zituni and Beotia), and N.W.

(along the Achelous, in Attica and Attar-nara). The highest points N. of the Gulf of Corinth reach heights of over 8200 ft., Par-nassus, the most famous, but not the highest, being 8060 ft. None of the rivers are of any great size, but the chief are the Peneus, in the N.E.; the Achelous or Asprop, in the N.W.; the Sperchius (flowing to Gulf of Lamia); the Vardo (S. of Morea); Rhodopis (W. of Morea); and Mornos, flowing into the Gulf of Patras. The amount of encircling sea moderates the temperature—mean, about 60° Fahr.—and in the summer months (April to September) there is almost no rain, the mean fall then at Athens being about ½ in.

**Government, &c.**—The government is a constitutional monarchy, with the legislative power vested in one chamber of representatives, called the Bulk. The total population is 2,431,000, of whom 593,600 are in the islands. About 60 per cent. are engaged in agricultural or pastoral pursuits, over 16 per cent. in trade, and some 9 per cent. are artisans. The means of communication has improved greatly in recent years, and there are now over 2,200 m. of good roads, and nearly 800 miles of railway, principally in the Plain of Thessaly in the N., and from Athens along the N. shore of the Gulf of Ægina and the S. side of the Gulfs of Corinth and Patras. Much, however, remains to be done before anything like the full development of the country can be said to be within reach. The Corinth Canal is separately noticed.

**Resources and Productions, &c.**—The great industry, agriculture, is still in a very backward condition. The chief products are grapes for currants (mostly from Ionian Islands, and along the S. side of the Gulfs of Corinth and Patras), olives, figs, wine, tobacco, silk cocoons in Messenia district (S.W. of Morea); wheat, barley, rye, and maize (insufficient as yet for the needs of the country), and cotton. The forests cover over two million acres, the chief trees being oaks, firs, Aleppo pine, and black pine. One of the oaks is of value, as its acorns form the valonia used in tanning; and cotton, for which some parts of the country are very suitable, is increasing in importance. Of the currant crop, in order to keep up prices, one-tenth must by law be retained and sold to local wine-makers and distillers, the proceeds of the sale being set apart to assist currant-growers who may be in need of help. The manufactures, though still unimportant, are increasing—the weaving of coarse textiles, silk-spinning, paper-making, manufacture of gunpowder and dynamite, soap-making, distilling, &c. Greece is rich in ores. At Laurium (in the peninsula N. of Athens, on the E. side of the Gulf of Ægina) there are valuable mines of lead and silver-lead, manganese iron, iron, and zinc, with smelting works; iron is also found at Marathon, N.E. of Athens; iron and manganese in

Scaphos; and silver-bearing barites, manganese, and sulphur at Milos (both in the Cyclades); magnesite in Palos; and there are marble quarries at Larissa in the N. (very antique); Sikyros (one of the Northern Sporades)—glauber, violet, yellow, and red and white); Syra (in the S. end of Euboea, blocks of any size); Pentelicon (near Athens, blue and white); and at Timos (one of the Cyclades). The Páros (Cyclades) quarries are not at present being worked. Copper, chrome, lignite—Euboea, Oropos (N.E. of Athens), and many other parts of the country—emery (Naxos, one of the Cyclades), and petroleum are also found. The imports are valued at nearly £6,000,000, the leading articles being cereals (about 25 per cent.), textiles and yarn (12), coal, &c. (11), wood and timber (61), fish, ores and metals, chemicals, raw hides, sugar, live stock, coffee, glass and earthenware, paper, rice, and colours. The exports are valued at nearly £4,000,000, the leading articles being currants (more than half), ores (more than 20 per cent.), wine, tobacco, olive-oil, figs, gall-nuts, silk; and those of less import rice, sponges, emery, cognac, gunpowder, and olives and other fruits. Britain, Russia, and Austria-Hungary send about 60 per cent. of the imports, and Britain and France receive about 60 per cent. of the exports. The imports from the United Kingdom to Greece are valued at over £1,000,000, the chief being cotton goods and yarns, coal, woollens and worsteds, iron, machinery, fish, and chemical products. The exports from Greece to the United Kingdom are valued at about £2,000,000, the chief being currants (80 per cent. of the value), iron and chromic ore, raisins, valonia, sponge, manganese ore, zinc ore, and marble. There are British consuls at Corfu, Patras, Piræus, Syra, and Volo, and vice-consuls at the leading centres. Letter postage, 2½d per half-oz; postcards, 1d; parcels, not over 3 lbs, 2s 3d; over 3 but not over 7, 2s 9d; over 7 but not over 11, 3s 3d; telegrams, 6½d a word, four mails from London, and two to London every week, money orders both ways.

*Money, &c.*—The unit of account is the drachma=100 lepta=1 franc, but there is, meanwhile, a forced paper currency of which the drachma varies, but is worth about 6d. The metric system is being gradually introduced. The old standards were the livre=1.05 lbs avoirdupois, the oke=2.8 lbs, the cantar=123.2 lbs, the wine barrel=10½ gallons, the kilo=0.114 quarter, the pike=¾ yard, and the stremma=242 acre. The Greek royal flag has a blue ground with a white St. George's cross, in the centre of which is the royal arms, under a crown and red canopy, the merchant flag has alternate horizontal bars of blue (5) and white (4), and in the upper inner corner a blue square with a white St. George's cross.

**Greenock**, a seaport of W. Renfrewshire, Scotland, on the S. side of the Firth of Clyde, 22½ m. by rail W.N.W. of Glasgow; harbour and docks admit the largest vessels at all times, five graving docks, with depths of 9 ft. 0 in. to 29 ft. at ordinary high water. Chief industries, ship-building and sugar-refining, but there are also manufacturers of steam-engines, anchors, chain-cables, sail-cloth, woollens, worsted, and paper. Imports raw sugar, timber, iron and other ores; exports linen, jute manufactures, and coal. Pop 68,142.

**Greenore**, a port in Louth, Ireland, 11 m. E.N.E. of Dundalk, with steamer service to Holy head, 79 m.; Glasgow, 100; Liverpool, 150. Pop 600.

**Greenwich**, a town of Kent, England (but in the administrative county of London), on Thames, 5 m. E.S.E. of London Bridge, great Royal Observatory, from which (practically London) most countries now reckon the degrees of longitude, engineering and telegraph apparatus works, and chemicals. Pop 95,757.

**Grenada**, one of the Windward Islands, in the British West Indies, with an area of 133 m., and a population of 65,500, mostly negroes. The island is mountainous with many small streams. Being out of the track of hurricanes its harbour, at St. George, is the safest in the Windward Islands. Cocoa is the great staple, next to which, but of far less importance, are spices (chiefly nutmegs), and cotton and cotton seed. The bulk of the imports of general goods (over £200,000), comes from the United Kingdom and colonies, but a large amount comes also from the United States, and general manufactured articles are now also coming from that country, owing to more rapid transit, cheaper freight, lower charges for packing, and well-directed advertising. More attention on the part of British makers to the last two might help to improve their business. The value of the exports is about £300,000. Temperature 69° Fahr. in cold season, 88° in hot season, rainfall in different districts 60 to 155 in. Regular communication from London. Mails from and to London every fortnight, letters, 1d per half-oz, postcards, 1d, parcels, under 3 lb, 1s, between 3 and 7, 2s, between 7 and 11, 3s, telegrams, 4s 8d a word, money orders exchanged, letters, 13½ days, parcels, 14 days.

**Grenoble**, a town of the department of Isère, France, on both sides of the Isère, 59 m. S.E. of Lyons. Manufactures kid-gloves (at place itself, and in neighbourhood), Chartreuse liqueur, hats, hardware, &c. Pop 69,000.

**Greytown**, or San Juan de Nicaragua, the chief port of Nicaragua, in the extreme S.E. on the Caribbean Sea at the mouth of the San Juan River, would be the eastern terminus of the proposed Nicaragua inter-oceanic canal. Bananas, rubber, mahogany. Regular communication from London. Letters, 23 days. British consul. Pop 2500.

**Grimsby**, a seaport of Lincolnshire, England, on the S side of the mouth of the Humber, 15 m. ESE of Hull, and 40 NE of Lincoln, docks with depth on sill at high-water of from 16 to 26 ft, three graving docks of 400 to 450 ft long, with 14 to 20 ft on sill. Chief fishing port of the country, and its industries comprise ship-building, flax-dressing, and manufactures of leather, cordage, and beer. Imports (valued at nearly £8,000,000 a year), wool and woollens, butter, timber, cottons, eggs, embroidery and needlework, glass, iron ware and iron, barley, margarine, boots, shoes, and gloves, bacon and fresh beef, musical instruments, and toys and games, exports (valued at nearly £11,000,000), cottons and cotton yarns, woollen and worsted yarns and goods, machinery, coal, manufactures of caoutchouc, fish, and leather Pop 63,138

**Grodno**, a government of W Russia, surface in N and NW undulating to 900 ft, elsewhere flat and swampy; drained by Bug, Dneiper, and Narew, which are navigable and connected by canals, timber, cattle, grain, hemp, flax, and wool Chief town of same name on Niemen, 533 m SW of St Petersburg Area of province, 14,931 m Pop 1,618,000, pop of town, 47,000

**Groningen**, a town and a province in the N of Holland The town, 92 m NE of Amsterdam, has a canal from Delfzijl on Dollart Zee, 25 m, with 14 ft of water, boat-building and manufactures of tobacco, Dutch tiles, woollen and linen goods, brushes, &c, imports coal and timber, corn, straw, moss litter, strawboards, and cattle The province flat and marshy, especially in the SE; has rich pastures, butter, cloth, linen, paper, pottery. British vice-consul Area of province, 790 m Pop 303,000; pop. of town, 68,000

**Gruyère**. See Freiburg (Swiss)

**Guadalajara**, a town of Mexico, on Rio Grande de Santiago, 285 m by rail WNW of the city of Mexico Centre of Mexican cotton and woollen manufactures, pottery and metal wares Pop 84,000

**Guadalquivir**, the most important river of Spain, with a course of 370 m and a basin of 21,600, flowing into the Gulf of Cadiz, and navigable by steamers as far as Seville, 80 m from its mouth

**Guadeloupe**, one of the most important of the French colonies in the West Indies, Windward Islands, and consisting of an east island 36 m by 12, and a west island (Guadeloupe proper) 35 m by 18 The former is low coral, the latter volcanic and hilly, rising to 4870 ft (La Soufrière, an active volcano), earthquakes frequent The soil is fertile and produces heavy crops of sugar cane, also coffee, cacao, and forests (logwood, &c), about 450,000 tons, entered and cleared Regular communication from London Mails from and to London every fortnight, letters, 2½d, postcards, 1d., parcels,

under 3 lbs., 3s, between 3 and 7, 3s 6d.; between 7 and 11, 4s; telegrams, 6s 2d a word; money orders exchanged Letters, 14 days; parcels, 15½. British vice-consul. Area, 583 m, or with adjacent smaller islands, 688 Pop 172,500

**Guanajuato**, a state of Mexico on the central plateau, mountain ridges, with fertile flats between; silver, lead, gold. Area, 11,370 Pop 1,065,500 The town, 80 m SW of San Luis Potosi, has a population of 39,500

**Guatemala**, the most northerly of the Central American Republics, having an area of about 48,290 m, centre 16° N 90° W. The President is appointed for six years, and is not eligible for a second term at once There is a National Assembly chosen by universal suffrage, one member to every 20,000 electors, the appointment being for four years The Council of State of thirteen members is appointed partly by the President and partly by the National Assembly The country is very mountainous, having several volcanic peaks over 13,000 ft high, and much of it is unexplored, earthquakes are frequent, the climate is, on the whole, extremely pleasant, especially in the upland valleys, but the coast lands of the Pacific are hot and infested with yellow fever The soil is very fertile The chief crop and export is coffee, but sugar, india-rubber, cacao, fruits, cotton, sarsaparilla and other medicinal plants also abound Gold, silver, lead, brown coal, tin, copper, manganese, antimony, sulphur, salt, &c are found, but the development of all these, and of the valuable timber and other products, is much hindered by defective communication. Railway extension is, however, taking place, and there are now good roads here and there, but most of the traffic is still by mules The industries are merely of local importance, and include the distilling of aguardiente spirit, the sale of which is a state monopoly, and the preparation of ramie Of a total import, valued at some £1,000,000, about 17 per cent come from Great Britain, 24 from Germany, and 41 from the United States, this last including provisions, wines and spirits, piece goods, iron, railway plant, flour, &c, the exports are coffee, bananas, rubber, and hides, of which more than half the coffee goes to Germany, less than a quarter to Great Britain, and less than one-fifth to the United States The total export is valued at about £1,000,000, the leading imports to Guatemala from the United Kingdom are cottons and cotton yarn, sacks, woollens, machinery, and iron Total value of imports from United Kingdom about £200,000, of exports to (coffee and rubber) about £180,000, but both have fallen off largely in recent years The dollar of 100 centavos has a nominal value of 4s, and the metric system is legalised, but the old Spanish weights and measures are still in force Mails from and to

London every week, letters, 2½d. per half-oz ; postcards, 1d , parcels, under 3 lbs, 2s , between 3 and 7, 3s , between 7 and 11, 4s ; telegrams, 3s to 3s 4d a word There is a British consul-general at Guatemala, the capital, which has a population of 72,500 San José, the chief port, is 72 m S S W. of Guatemala Pop of republic estimated at 1,574,500

Guayaquil, the principal port of Ecuador, on the Guayas, 30 m from its mouth, depth on bar 10 to 26 ft, and vessels of 25 ft draught can reach the city, railway to Chimbo (64 m ) on the way to Quito Iron foundries and machine shops, saw-mills, and a large brewery Imports linen, cotton, and woollen, goods ; metals, iron ware, and general goods , exports coffee, sugar, cocoa, sarsaparilla, india-rubber, straw hats, sugar, bark, hides, ivory-nuts, canes, orchella weed and condurango Distance from London, 10,670 m , Liverpool, 10,595 , Tyne, 10,950, Glasgow, 10,705, Panama, 800 Letters, 24 days British consul Pop about 51,000

Guayas, the province of Ecuador in which Guayaquil is situated ; famous for its cocoa Area, 9000 m Pop 98,500

Guaymas, a port of N W. Mexico, on Gulf of California, terminus of the Sonora railway to United States system at Nogales ; harbour 10 to 16 ft, and anchorage outside in 3 to 6 fathoms ; exports precious metals, plumbago, hides, wheat, and flour British vice-consul Pop 9000

Guben, a town of Brandenburg, Prussia, on the Neisse, 28 m S E of Frankfort-on-Oder, hats, and woollen cloth and yarn Pop. 33,500

Guelph, a river port on the Speed, Ontario, Canada, 45 m by rail S W of Toronto , flour-mills, wool-mills, sewing-machines, and agricultural implements Pop 11,500

Guernsey, the second largest of the Channel Islands, 30 m W of Normandy, 17 m N W. of Jersey, 9 m long and 5 wide, with an area of 28 m , or including the adjoining islets of Herm and Jethou, 30 m ; undulating surface sloping gradually from N to S Delightfully mild climate, so that oranges, melons, figs, and myrtles can flourish, produces vegetables, flowers, wheat, barley, and apples for cider, and grapes and tomatoes under glass, famous for its breed of cows giving milk suited for butter-making Exports productions, catile, and granite, to value of over £300,000 a year. Regular communication from London, Southampton, and Weymouth (last two daily in summer, thrice a week in winter) Distance of St Peter Port from Weymouth, 80 m , Southampton, 125, Falmouth, 103 Pop 40,477.

Guiana, a wide extent of country in the N E of South America, between 1° and 8° N, and between 51½° and 61½° W ; bounded along the northern side by the Atlantic Ocean, on the

E. and S. by Brazil, and on the W. by Brazil and Venezuela It is divided into three parts, known as British Guiana, on the W , Dutch Guiana, in the centre , and French Guiana, on the E. The physical features of all three are the same Skirting the Atlantic are fertile alluvial plains, 10 to 50 m wide, many parts of which, lying below the sea-level, are flooded during the rainy season From these the country rises in terrace undulations of some 150 ft to the mountainous interior, which reaches 9000 ft. Only the coast lands are cultivated, the hilly country being covered with thick virgin forest Rivers are numerous, and of the greatest importance, as being, with their connected canals, the principal means of communication The general direction of all is from S to N In British Guiana is the Essequibo, with its tributaries Cuyuni, Mazaruni, Demerara, and Berbice, while the Corentyne divides the British and Dutch provinces French Guiana, separated from Dutch Guiana by the Maroni, extends to the River Oyapock, which divides it from Brazil The climate of Guiana is very hot, the thermometer ranging from 70° to 95° Fahr, while the rainfall is very heavy—65 to 130 m in the year. Nevertheless, the conditions are less trying than in other tropical regions, deadly fevers being almost unknown

*British Guiana*, stretching from the mouth of the Orinoco to that of the Corentyne, and inland for more than 400 m, has an area of 120,000 m The population is concentrated almost entirely in the coast region, where the chief industry is the cultivation of the sugarcane, and sugar, rum, and molasses form 90 per cent of the export trade, the rest being made up of gold, rubber, furniture woods and hardwoods (except mahogany), and diamonds Of these (valued at over £2,000,000) the British Empire takes about 52 per cent., and the United States about 46 Of the imports of general goods (valued at about £1,300,000), the British Empire sends 59 per cent and the United States 28 Of a tonnage of 700,000, entered and cleared, over 63 per cent are British, Holland coming next with about 15½ Mails to and from London every fortnight, letters, 1d per half-oz , postcards, 1d , parcels, not over 3 lbs, 1s , between 3 and 7, 2s ; between 7 and 11, 3s , telegrams, 7s a word ; money orders exchanged Pop. 278,500

*Dutch Guiana*, or *Surinam*, lies between the rivers Corentyne and Maroni, and has an area of 46,060 m, most of which is under forest The principal productions are cocoa, sugar, gold, rubber, rum, timber, and coffee , and all these are exported, to the value of over £450,000 a year Sugar, rum, and cocoa go to the British Empire, and cocoa and sugar largely to the United States The forests are very valuable, and a much larger trade in timber might be

developed. The imports are valued at over £500,000, of which 18 per cent. come from Holland (cottons, woollens, and haberdashery—probably largely British or German in origin—machinery, and provisions), 23 per cent. from the United States (flour, meal, machinery, and petroleum); 19½ per cent. from the British Empire (cottons and woollens, machinery and manufactured iron, dried and preserved fish, grain, pulse, flour, and meal). The shipping, entered and cleared, is about 105,000 tons. Mails to and from London, and Southampton or and Amsterdam, every week; letters, 2½d per half-oz., postcards, 1d; parcels, not over 3 lbs, 2s, between 3 and 7, 3s, between 7 and 11, 4s; telegrams, 6s 9d a word. Pop. 70,500.

*French Guiana, or Cayenne*, with an area of about 10,500 sq. m., is, to a considerable extent, a poor settlement. There is little agriculture, but gold-mining (over 80,000 ozs.) is important, silver, iron, and phosphates are worked; and gold, marble, furniture woods, and gum are exported. The imports are valued at nearly £500,000, and the exports at £250,000; the shipping, entered and cleared, is about 77,000 tons. Mails from and to London every fortnight; letters, 2½d per half-oz., postcards, 1d.; parcels, under 3 lbs, 3s, between 3 and 7, 3s 6d, between 7 and 11, 4s.; telegrams, 6s 9d a word. British consul. Pop. 30,500, of whom over 7000 are convicts.

**Guinea**, the name given to the coast of Africa between the Senegal and German South-West Africa, the part running E and W. being Upper Guinea, and the part running N. and S. Lower Guinea. The Gulf of Guinea is the great curve at this part of the West African coast. See the different territories.

**Guinea, New.** See New Guinea.

**Guisborough**, a town and parish in the Cleveland district, N. Riding of Yorkshire, England, the town 7½ m. by rail E.S.E. of Middlesborough; iron ore and cast steel. Pop. 5645.

**Gulf Stream**, a warm current issuing from the Gulf of Mexico and proceeding along the United States coast to near Newfoundland and thence across the Atlantic to Great Britain and Norway. Its rate, at first 5 m. an hour, is at Newfoundland only 1½, and thereafter falls to 5 m. a day. Originally about 50 m. wide, it broadens as it advances, and the surface temperature, at first over 81° Fahr., gradually also becomes less. The depth varies from 200 fathoms to three-quarters of a mile.

**Gympie**, a town of Queensland, Australia, 107 m. by rail N. of Brisbane, on a rich gold-field, with an output of over £270,000 a year, and also with coal, copper, silver, antimony, cannabur, bismuth, and nickel, in neighbourhood. Pop. 12,000, and within 5 m. radius, 11,500.

## H

**Haarlem**, a town of Holland, 10 m. W. of Amsterdam, with cotton mills, bleaching, dyeing, and type-founding establishments; and a large trade in flower bulbs (tulips, hyacinths, &c.), and seeds. Pop. 65,500.

**Haddingtonshire**, a county of S.E. Scotland, with chief town of the same name, on the S. side of the Firth of Forth, and washed on N.E. by the North Sea. It rises from the coast to the Lammermoor Hills (1773), and has here and there isolated heights of from 600 to 720 ft. It is drained mainly by one of the Tyne. Excellent agricultural district, and rich in the W. The town, 18 m. by rail E. of Edinburgh, is noted as the birthplace of John Knox, and the birthplace and burial-place of John Welsh C. H. A. Area of county, 17,100 sq. m. Pop. 39,000, pop. of town, 37,000.

**Hague, The**, capital of Holland and the seat of the court, on a branch of the London and Rotterdam Canal 2 m. from the North Sea, 14 m. N.W. of Rotterdam, and 33 m. S.W. of Amsterdam. The town, founded by merchants of a foreign and local printing works, and a seat of justice, is a seat of commerce, finance, and art. Pop. 145,000. Letters, 11½ p. in p.m. 15. Post-office, 10 a.m. Pop. 212,000.

**Haidarabad** See Hyderabad.

**Haifa**, a Syrian seaport at the foot of Mount Carmel, and the starting-point of a railway to Damascus, harbour, 20 ft. Exports wheat and sesame, imports general goods; with which Britain might have more of the trade in provisions, small tools, and house fittings. British vice-consul. Pop. 8000.

**Hainan**, an island in the extreme S. of China, separated from the Kwangtung peninsula and province (to which it belongs) by the Hainan Strait, 13 m. wide. It is about 160 m. long by 100 wide, flat in N., but hilly in centre and S.; subject to earthquakes and violent storms. The imports and exports (not a very good one)—Hochow—pop. 25,000—with an anchorage, with 20 ft. at low-water) are valued each at well over £200,000 a year, the former consisting of cotton and woollen fabrics, opium, rice, petroleum, and flour; and the latter of paper and live stock, sugar, haberdashery, gunpowder, camellia, hemp, betel-nut, and eggs. The trade is almost entirely with Hongkong, and good ships (mostly of British origin) are of British origin. No ships of 100 tons entered and cleared, of which nearly 5 per cent. are British, 64 French, and 52

**German** The natives neither use, understand, nor are able to purchase, the expensive labour-saving appliances of more civilised countries, what they want, meantime, are things like their own, and at the lowest price British consul at Kiangchow (40,000), the chief town, 3 m from Hoi-how Pop. estimated at 2,500,000

**Hainault, or Hainaut**, a province of S Belgium, on the frontier, flat and fertile in N and W, drained by Scheldt, Sambre, and Haine Horses, cattle, sheep, wheat, flax, fruit, vegetables, and beet, in S and S E, round Mons and Charleroi, richest coal and iron districts of Belgium, with manufactures of linen, porcelain, iron and steel wares, lace, and paper Area, 1437 m Pop 1,143,000

**Haiphong, or Haifong**, a port in the delta of Tonkin, at the mouth of the Red River, French Indo-China, 300 m from Hong-Kong Regular communication from London Pop about 12,000

**Haiti** See Hayti

**Hakodate**, a port of Yezo, Japan, overlooked by a high rock (1160 ft) somewhat like Gibraltar, with a fine deep-water anchorage of from 5½ to 9 fathoms, sends vessels to Saghalien cod-fishing, and engages in salmon and herring fisheries, and in sealing, has gold, petroleum, coal, salt, brewing, and making of paper and nails Imports fish manure, kerosene, and salted fish, and exports edible sea-weed, sulphur, dried fish, rice, and salt; the exports go largely to China, and to Saghalien and other parts of Russia in Asia, imports come largely from Saghalien and other parts of Russia in Asia Of some 185,000 tons, entered and cleared, 11½ per cent are British, and 66 Japanese Distance from London, 11,535 m; Liverpool, 11,460, Glasgow, 11,570; Tyne, 11,820, Cardiff, 11,357 British consul. Pop 90,500

**Halifax**, a town in the West Riding of Yorkshire, England, on the Hebble, 43 m S W of York, and 209 m by rail N N W of London Communication by Calder and canals with Hull and Liverpool Staple industries, manufactures of carpets and worsteds, while damasks, merinos, fancy-dress goods, boots, chemicals, iron, and some cotton goods, are also made Pop 101,933

**Halifax**, the chief port of Nova Scotia, Canada, near the centre of the S E coast, fine, extensive, deep-water harbour (12 to 15 fathoms); never frozen, and so Halifax is the winter port of the Dominion The Canadian Pacific and Inter-colonial Railway (Grand Trunk) connect it with the other railway systems of Canada, and with those of the United States, while steamers run regularly to London, Liverpool, Glasgow, New York, Boston, Baltimore, New foundland, and the West Indies, graving dock 571 ft. long, with 30 ft. of water on sill Imports general goods and

manufactures of all kinds, exports coal, apples, cured fish, canned lobsters, lumber, deal, wood-pulp, hay, potatoes, oats, flour, cheese, butter, furs, oils, &c; annual tonnage, entered and cleared, about 1,800,000 tons, foreign trade valued at £2,500,000 Distance by rail from Montreal, 766 m Regular communication from London, Liverpool, Glasgow. Distance from London, 2685 m, Liverpool, 2610, Glasgow, 2720, Tyne, 2965, Cardiff, 2505, Dublin, 2409 Parcels, 10 days Pop 41,000

**Halle**, a city of Prussian Saxony, on the right bank of the Saale, 20 m by rail N W of Leipzig, with important salt manufactures, sugar refineries, breweries, machinery making, manufactures of mineral oil (from lignite found in neighbourhood), and a trade in fruits Pop 157,000

**Halmstad**, a port of S W Sweden, on the Cattegat, 75 m S E of Gothenburg, with harbour 17 ft. deep, railway centre Imports coal, grain, machinery, iron, and manure, exports granite, wooden goods, and wood-pulp Of over 370,000 tons, entered and cleared, 8½ per cent are British, 17 German, and 61 Swedish Regular communication from the Tyne British vice-consul Pop 15,500

**Ham, West**, an eastern suburb of London, in Essex, on Thames, opposite Greenwich, with ship-building, chemical factories, silk-printing, and distilling Pop 267,308

**Hamburg**, the chief seaport of Germany and the greatest commercial city of continental Europe, on the N bank of the Elbe, 70 m up from the sea, and 177 m by rail N W of Berlin, great railway centre, harbour and channel, with depth at mean tides of 18½ to 23½ ft, but this is being increased The port is a great distributing centre for the Continent, and between the Continent and foreign countries, and has half of the whole import of Germany, and half of the entire trade between Germany and the British Empire Of a total tonnage, entered and cleared, of more than 16,000,000 tons, over 34 per cent. are British, 53 German, 3½ Norwegian, Danish and Dutch vessels about 1½ per cent each, the other countries of Europe making up the bulk of the rest A small amount belongs to North and South America Nearly half the British vessels clear in ballast Of imports valued at over £100,000,000 the United Kingdom sends 18½ per cent., British India over 8, the United States, 21½, and Central and South America over 22, of exports valued at nearly £90,000,000 the United Kingdom receives 25 per cent.; India nearly 3, South Africa, 1½; the United States, 11, and Central and South America, 13 The chief imports from the United Kingdom are coal, pig and smelting iron, iron in sheets and plates, machinery, cotton yarn, linen yarn and twist, woollen and partly woollen tissues, tea, fresh vegetables, rum, varnish, bar iron,

horse hides, skins, leather, ivory, cotton waste, tallow, india-rubber goods, crockery, anchors and chains, rough iron goods, sulphate of ammonia, wool, jute and jute yarn, cotton tissues, silk and partly silk tissues, coffee, cocoa, copper, chemicals, and paper. From British North America (total value some £260,000) come corn, pulse, lard, asbestos, wood-pulp, train-oil, and canned provisions. From India, hides, rice, &c. The chief exports to the United Kingdom are raw and refined sugar, copper, hides, clover seeds, potato products, glass bottles, porcelain, woollen yarns, woollen fabrics, machinery, eggs, rice, india-rubber, nitrate, chemicals, zinc, leather, raw wool, cotton yarns, cotton fabrics, linen goods. To British North America (total some £300,000), raw sugar, cement, nitrates, chemicals, glass ware, steel ware, iron goods, and toys. The chief industries are sugar-refining, ship-building, manufactures of chemicals, cigars, furniture, india-rubber goods, starch, jute, &c. Regular communication from London, Harwich, Goole, Grimsby, Hull, the Tyne, Leith, Grangemouth, Southampton, Plymouth, Bristol, and Manchester. Distance from Hull, 420 m.; Tyne, 460; Leith, 530. Letters, 21 hours; parcels, *via* Holland, 1½ days; direct steamer, 3 days. British consul-general. Pop 706,000. The state of Hamburg has an area of 168 m., and a pop of 768,500.

**Hamilton**, a town of Lanarkshire, Scotland, on left bank of the Clyde, 11½ m. by rail S E of Glasgow, the centre of a great coal district. Pop 32,775.

**Hamilton**, a city of Ontario, Canada, at the western extremity of Lake Ontario, 40 m. by rail S W of Toronto, railway centre, manufactures of cotton and woollen goods, boots, sewing-machines, glass ware, &c. Pop 53,000.

**Hammerfest**, a port on Kvaløe, N Norway, the most northerly town in Europe, 60 m. S W of the North Cape, 70° 40' N., and 23½° E.; summer very hot, with the sun two months above the horizon, great centre of northern fisheries; and the winter being, owing to the Gulf Stream, much milder than might be expected, fishing is carried on all the year. Imports coal, salt, hemp, and provisions; exports dried cod; whale, seal, cod, and shark, oil, walrus hides and teeth, reindeer and fox skins, and down. Distance from Tyne, 1200 m. British vice-consul.

**Hanau**, a town of Hesse-Nassau, Prussia, on the Main, 13 m. by rail E. of Frankfurt; specially famous for jewellery and gold and silver ware; manufactures also carpets and other woollens, silks, and chocolate. Pop. 30,000.

**Hangchow**, a port near centre of E. coast of China, 110 m. S W. of Shanghai, at the S end of the Grand Canal, opened to foreign commerce only in 1895, silk manufacture. Pop. estimated at 800,000. *Hangchow Bay*, on

which it stands, is a large inlet, 130 m. long, and 70 wide at mouth, with, in its upper part, a violent bore, occasionally reaching a height of 23 ft.

**Hangö**, a port of Finland, Russia, on the Gulf of Finland, 128 m. by rail W. of Helsingfors; harbour has 70 ft. of water at entrance, and 30 to 40 ft. inside; large transit trade to the interior. Imports coal, iron, cotton, and provisions; exports wood, wood-pulp, tin, paper, furs, skins, butter. Regular communication from Hull. British vice-consul. Pop. 5000.

**Han-kiang**, a large tributary of the Yang-tse-kiang, navigable for large vessels in its lower course, and for smaller to Hangchow in the S.W. of the province of Shensi. Its middle course is a coal-bed.

**Hankow**, or **Hankau**, a river port of central China, at the confluence of the Han-kiang and Yang-tse-kiang rivers, 670 m. from the sea; the harbour in summer may be entered by the largest vessels, but in winter cannot be approached by vessels drawing much over 9 ft., at most 12 ft. Almost the whole trade is carried on with other parts of China, and there is a large transit trade, re-export taking place by coasting and river junks, or goods are sent inland in other ways. There is a total import valued at nearly £1,900,000, of which £3,500,000 is foreign goods, of which the chief are cottons, grey and white shirtings, T-cloths, drills (mostly American), sheetings (mostly British), chintzes, laces, Italian flannelette, cotton yarns (mostly Japanese and Indian); woollens, camlets (British), laces, long ells, broad cloths, and Italians; tin plates and slabs; lead-pigs, copper irgots, coal, aviaire dyes, locomotives and machinery, petroleum (about equally divided, meanwhile, between American, Russian, and Sumatran, but the latter will probably gain ground), black pepper, railway plant and sleepers, sandal-wood, Japanese edible sea-weed, and sugar. The chief imports of native products are sugar, silk piece goods, Shanghai cotton yarn, bags (hemp and gunny), bamboo shoots, medicines, musk and opium. The exports have a total value of over £7,500,000, of which over £6,500,000 are native products. The chief (excluding re-exports) are black tea, black and green brick tea, opium, wood-oil, hides, silk (raw yellow and piece-goods), beans and bean-cake, hemp, medicines, ralls, sesamum, vegetable tallow, tobacco, cotton yarn, fungus, musk, and white wax. Of nearly 2,700,000 tons, entered and cleared, 43 per cent. are British, 20 German, about 23 Chinese, and 10 Japanese. British consul-general. Pop. about 850,000.

**Hauley**, a town in the Potteries, Staffordshire, England, with coal and iron in neighbourhood, and manufactures of china, earthenware, and encaustic tiles. Pop. 61,524.

Hanoi, the chief town (rather a collection of villages) of Tonkin, French Indo-China, on the right bank of the Red River, 110 m from its mouth; will be an important centre of transit and distribution when railway system is complete Pop estimated at 150,000

Hanover, a province of N.W. Prussia, with a chief town of the same name The latter, 158 m W. of Berlin, is an important railway centre for N. Germany, and has engine shops, iron foundries, and manufactures of type, hardware, linen, tobacco, india-rubber goods, chocolate, and beer British vice-consul The surface of the province is flat, except in the S where in the Hartz it rises to over 3000 ft; the chief rivers are the Elbe, Weser, and Ems The industries are linen and cotton weaving, dyeing, metal working, and the manufacture of artificial manures, cement, glass, paper, and pottery The province is rich in minerals, iron, silver, zinc, lead, copper, coal, asphalt, salt, and barytes Letters, 19 hours, parcels, *via* Holland, 24 hours; *via* Hamburg, 3½ days British vice-consul. Area of province, 14,869 m Pop 2,591,000; pop of town, 236,000

Harbour Grace, a port of Newfoundland, on the W. side of Conception Bay, Avalon Peninsula, 27 m. W. of St John's (84 by rail) Pop 6500

Harburg, a port of Prussia, on the Elbe, 5 m S of Hamburg; good harbour with average depth of 16 to 17 ft., the channel from Altona is being deepened so as to admit vessels of 17 ft and over; ship-building yards; imports coal, iron, slate, bricks, paraffin, tar, resin, nitrates, phosphates, bone ash, china clay, herring, exports manure, oil-cakes, oil, cement, palm-oil British vice-consul. Pop. 49,500

Harlingen, a port of Holland, on the Zuyder Zee, 14 m by rail W. of Leeuwarden, good harbour, taking vessels of 18 ft Imports coal, salt, agricultural and other machinery, and general goods, from Great Britain; wheat, rye, hemp, linseed, &c, from the Baltic ports; timber from America, Norway, and the Baltic, exports to Great Britain cattle, butter and other dairy and farm produce, flax, chicory, shell-fish, farma, and turf litter, coal and coke to Baltic ports, tiles to Denmark, North Germany, and Norway; and has a transit trade in coal to Sweden and the Baltic Regular communication from London, Hull, Leith. British vice-consul Pop 10,500

Harrar, an important trade centre in S E of Abyssinia, with railway communication to Jibouti (186 m), and caravans to Zaila (10 to 20 days, 182 m, camel post 5 days), district fertile through irrigation, with coffee and fruits (the former exported), and also hides and cattle British vice-consul Pop estimated at 35,000

Harrisburg, the chief town of Pennsylvania, on the E bank of the Susquehanna, 100 m by

rail N. of Baltimore; iron and steel works and rolling mills, with steel and iron manufactures, cotton weaving, flour milling, and a lumber trade Pop 50,600

Harrismith, an important trading and railway centre in N.E. Orange River Colony, 249½ m. by rail N.W. of Durban, 60½ W. of Ladysmith, and 210 m (railway only projected) N.E. of Bloemfontein Pop 1700

Hartford, the chief town of Connecticut, United States, on the right bank of Connecticut River, at the head of steamer navigation, 50 m from Long Island Sound, and 112 m by rail N.E. of New York, with which it has also daily steamer communication, except from the middle of December to the middle of March, when the river is frozen Manufactures of Colt's pistols, Gatling guns, engines, boilers, machinery, iron wares and hardwares Pop 80,000.

Hartlepool (including West Hartlepool), a seaport of Durham, England, on Hartlepool Bay, N of the mouth of the Tees, 18 m E.S.E. of Durham, good harbour, with a minimum depth at entrance of 12 ft, and docks with depths of from 17½ to 25 ft.; graving dock 543 ft long, with 19 ft on sill at springs; industries ship-building, marine-engine works, cement manufactures, and fishing *West Hartlepool*, on the south side of the bay (the shipping side), practically constitutes with Hartlepool one town. The port has very important ship-building yards, and marine-engineing establishments The trade is mostly with the Baltic and Dutch ports Imports (total £2,000,000), timber, eggs, refined sugar, iron ore, staves, iron and copper pyrites, rags for shoddy, butter, toys and games, and musical instruments, exports (total some £1,400,000), coal, machinery, manufactures of iron and iron and steel, woollen and worsted yarn, wool, and cotton yarn and manufactures. Distance from Leith, 128 m Pop. of Hartlepool, 22,737, of West Hartlepool, 62,614

Hartz, the most northerly of the mountain groups of central Germany, between the rivers Saale (Elbe) and Leine (Weser), 57 m long and 20 wide, with an extreme height of 3745 ft (Brocken), rich in silver, lead, copper, iron, and coal, forests

Harwich, a port of Essex, England, at the southern extremity of the estuary of the Stour, 71 m by rail N.E. of London, harbour 17 to 30 ft at low water, steam communication daily with Hook of Holland (100 m, 8½ hours), Rotterdam, and Antwerp, and bi-weekly with Hamburg and Esbjerg Imports (total £16,000,000 to £18,000,000 sterling) woollen yarn and manufactures, bacon, fresh beef, mutton, and pork, silk yarn and manufactures, butter, cotton manufactures, eggs, margarine, gloves and other leather manufactures, manufactures of caoutchouc, cocoa and chocolate, glass manufactures, iron manu-

factures, musical instruments, paper (including straw-board), cheese, clocks, barley, maize, leather, lace, plants, poultry, raw vegetables, refined sugar, furs and manufactures of skins and furs, bead trimmings, buttons (not of metal), china and earthenware, electrical goods, embroidery, needlework and fancy goods, ornamental feathers, fish, ivory, linen manufactures, yeast, condensed milk, wine, toys and games, and manufactured tobacco; exports (total some £5,000,000), woollen and worsted manufactures and yarn, cotton manufactures and yarn, machinery, leather, horses, manufactures of caoutchouc, hardware and cutlery, silk yarn and manufactures, herring, hats, books, and biscuits; and transit export of foreign produce—wool, furs, tin in blocks, and prepared cocoa. Pop 10,019

**Hauraki, Gulf of**, an inlet on the N. coast of the province of Auckland, in N. of North Island of New Zealand, 70 m. long and 40 wide, and with many islands.

**Hauran**, a rich wheat-producing district of Syria, E. of the Sea of Galilee, connected by rail with Haifa and Damascus-Beyrout.

**Havana**, the principal commercial city and port of the West Indies, on the N. side of the island of Cuba, the harbour is excellent, receiving the largest vessels, and there is a floating dock owned by the port, while a dry dock is being constructed. The staple industry is the making of cigars. Imports textiles, metals, provisions, and general goods, of a total value of some £9,500,000, 15 per cent. come from the British Empire, 40 from United States, and 17½ from Spain; exports cigars, cigarettes, and tobacco (these three 80 per cent. of whole), sugar, rum, molasses, and fruit; of a total of £5,600,000, 18 per cent. are sent to the British Empire, 51 to United States, and 16 to Germany. Of over 4,000,000 tons, entered and cleared, 12 per cent. are British, 11 Cuban, 43½ United States, and 17 Spanish. Regular communication from London, Liverpool, and the Tyne. Distance from London, 4100 m; Liverpool, 4115, Tyne, 4480, Glasgow, 4225, New York, 1175; New Orleans, 585, Vera Cruz, 820, and Tampico, 835. Telegrams, 1s. 8d a word, letters, 12 days. British consul-general. Pop 236,000

**Havel**, a river of N. Germany, tributary of Elbe, passing Potsdam, navigable for boats over 180 m of its 200 m. course, and in lower part for large barges, canal communication with Elbe (Munich-Havel) and Oder (Finow Canal)

**Havre**, a port of the department of Seine-Inférieure, France, on the N. side of the Estuary of the Seine at its mouth, 143 m by rail N. W. of Paris, second port of France, and the only French port visited by very large British steamers; outer harbour with depth of 26 ft. at high-water of neap tides and 32 ft. at springs,

and the channels and berths are being deepened, still hampered by shifting sand-banks and poor railway communication, dry dock 656 ft. long with 21½ ft. on sill at neaps, and 25½ at springs. Havre is a great emigrant port, and has ship-building yards, petroleum and sugar refineries, machine works, flour mills, and dye works. It has a great trade in coffee from Brazil, the West Indies, Hayti, Java, and India, and in British goods in transit to Paris and other parts of France. The sale of British goods here is probably as large as is possible under the present high French tariff, as they are in demand owing to their excellent reputation for quality and durability. Germany is, perhaps, trenching on us in cutlery. The principal imports are coal (almost entirely from Great Britain), wine, coffee, cotton, copper, dye-woods, wheat and other grain, flour, oil-seed and crude oil, furniture woods (mahogany, rosewood, &c.), timber, pepper, rice, cocoa, hides, indigo, fruits and preserved vegetables, sugar, nickel, wool, and petroleum. The exports (valued at over £30,000,000 and greater than those of Marseilles, though the imports are less) are chiefly wire, millinery and artificial flowers, cotton, woollen, and silk, tissues, and ribbons, furniture, cake and oils, dyes and essences, drugs, potatoes, paper, sardines, butter, glass ware, and hot-house plants. Of 5,000,000 tons, entered and cleared, the United Kingdom has (exclusive of packet-service) 37½ per cent; France, 25, Germany, 17½, and Holland, 6½. There is regular communication with London and Southampton, the latter a daily service. Distance from London, 198 m; Southampton, 122; the Tyne, 353. British consul-general. Pop 130,500

**Hawaii**, or the Sandwich Islands, twelve islands, forming the most extensive group of the Polynesian Archipelago, between 19° and 22° N. and 155° and 160° W.; now a territory of the United States. The chief islands are Hawaii (4210 m), Maui (760), Oahu (600), Kauai (590), Molokai (270—the Leper island), Lanai (150), Niihau (97), and Kahulau (63). The larger islands are mountainous, rising in Hawaii to over 13,600 ft., and also contain some of the most powerful active volcanoes in the world. The climate is warm-temperate, the mean being about 74½° Fahr. The eastern slopes receive the moisture of the trade winds, but on the W. sides the islands are dry, average rainfall, 54 in. Sheep are reared in great numbers, and on the lower grounds sugar and rice are cultivated, while the higher slopes are covered with forest. The position of the islands, midway between the Old and New Worlds, gives them great commercial importance. Trade is almost entirely with the United States, which sends nearly £4,500,000 of a total value of imports of £5,000,000, and receives practically the whole of the exports of some £2,500,000, as only products to the value of

£21,000 are sent to foreign countries. Of this Germany receives about half, to the United Kingdom there is no direct export. The chief imports from foreign countries are coal (mostly from Australia and Canada), chemicals, fibres, cottons, manufactures of iron and steel and other metals, cement, spirits, wine, rice, fish, and vegetables. Almost the whole export is sugar. Of 1,909,000 tons entered and cleared, 16½ per cent. are British. Muslins, lawns, Ballbriggan hosiery, Irish dunnies, fine woollen tailoring cloth, linens, cotton thread and mosquito netting, are the chief articles that make up the United Kingdom import, valued at from £65,000 to £200,000 in different years. Money orders exchanged, letters, 2½d; postcards, 1d. British consul. Total area, 6610 m. Pop 151,000.

**Hawick**, a town of Roxburghshire, Scotland, on the Tyviot, 52 m by rail S.S.E. of Edinburgh, with dye-works and manufactures of tweeds, hosiery, flannels, plaiding, shawls, &c. Pop 17,303.

**Hawke's Bay**, a provincial district, on the E coast of the North Island of New Zealand, between Auckland and Wellington; great plains, and undulating hill country. The Ahuriri plains, with over 80,000 acres, are magnificent agricultural country. In the N cattle-breeding and sheep runs; in the S the Seventy Mile Bush, with valuable timber. Area, 4410 Pop 35,500.

**Hayti**, or **San Domingo**, next to Cuba the largest of the West Indian Islands, lying between 17½° and 20° N., and 68° 20' and 74½° W., and with a length of 400 m, and a breadth of 160. The island is mountainous, the ranges running from E to W, and rising to over 10,300 ft. (Loma Tina, the highest mountain in the West Indies), with fertile valleys between. In the low lands the climate is hot and moist, but in the higher lands cooler and more equable. There is only one short railway line, though others are projected, and communications generally are bad. The island is rich in cabinet and dye woods—mahogany, rosewood, satin-wood, logwood, &c.—and on the mountains pine and oak. The rivers are small and not navigable. Agriculture is backward, export of coffee (a very important product sent mostly to France, Belgium, and Germany) is handicapped by a heavy duty, as is also the trade in cattle, and the minerals (many and valuable—coal, iron, copper, &c.) little worked. The island is divided between the two negro republics of Hayti and San Domingo, and unsettled political conditions of these have seriously retarded its development. From the republic of Hayti the chief exports are coffee, cocoa, logwood, and mahogany, &c. (mostly to United Kingdom), cotton, hides, copper; imports from United Kingdom in particular, cotton and linen goods, wrought and unwrought

iron, and machinery. The total imports are worth probably £1,000,000, and the exports twice as much, but owing to the fluctuating value of the dollar only approximation is possible. The imports from the United Kingdom are worth probably some £300,000, and the exports some £70,000. There is regular communication from Liverpool and the Humber. Postage, 2½d per half-oz; postcards, 1d, mails from and to London every fortnight or oftener, telegrams, 6s 4d to 7s 5d a word. The unit of account is the gourde or dollar, of the nominal value of 4s, and the weights and measures are according to metric system. British consul-general at Port-au-Prince, and vice-consul at Aux Cayes. Area of island, with adjacent dependencies, about 28,800 m. Area of republic of Hayti, 10,201 m.; estimated pop of republic, mostly negroes and mulattoes, 1,300,000.

**Heathfield**, a village of Sussex, England, 11 m S of Tunbridge Wells, with natural gas obtained at a pressure of 200 lb per sq in from bores about 400 ft. deep. The gas was discovered in 1896, and efforts are being made to turn the product to full commercial account.

**Heckmondwike**, a town of the West Riding of Yorkshire, 8 m by rail S.E. of Halifax, coal and iron in neighbourhood and making of machinery, town itself centre of heavy woollen manufactures—blankets, carpets, rugs, flushings, and pilot-cloth. Pop 9159.

**Heilbronn**, a town of Wurtemberg, Germany, on the Neckar, 28 m by rail N of Stuttgart; fruit and wine district; manufactures of silver plate, paper, chemicals, &c., centre of river traffic, and trade in grain, timber, and provisions. Pop 38,000.

**Helder**, a town in N Holland, at entrance to Zuyder Zee, at northern end of N Holland Canal. This passage, 50 m long, 125 ft wide, and 21 ft deep, has lost importance since the opening of the North Sea Canal. British vice-consul. Pop 26,000.

**Helsingborg**, a seaport in S Sweden, opposite Elsinore, on the Sound, excellent harbour, with 23 ft of water, kept open in winter by ice-breakers. Imports coal, iron, manure, oil-cake, oil, salt, grain, bran, and coffee, exports cattle, butter, eggs, beef, bacon, bricks, purple ore, wood-pulp, and wooden goods. Of 1,500,000 tons entered and cleared, less than 3 per cent. are British, 73 Swedish, 13 Danish, and 4 German. Regular communication from Humber. British vice-consul. Pop 25,000.

**Helsingfors**, the chief town of Finland, a port on peninsula in the Gulf of Finland, 181 m by sea W of St Petersburg, harbour admits the largest vessels. Imports coal, iron, steel, corn, machinery, colonial goods, cotton, oils, exports timber, paper, wood-pulp, butter, glass, china, &c. Regular communication from

Hull. Distance from London, 1249 m ; Liverpool, 1600, Leith, 1150, and Tyne, 1120  
British consul Pop 77,500

Helvoetsluys, a port of S Holland, at entrance to Maas navigation to Rotterdam (17 m.) British consular agent. Pop 5000.

Herat, a town on the W of Afghanistan, 300 m. W of Kabul. Near the meeting point of the Afghan, Russian, and Persian boundaries, it is the focus of several trade routes between India, Persia, and Central Asia ; and has export and import trade to and from these territories in textiles and general goods. Pop about 30,000

Hérault, a coast department of S France, N W of Gulf of Lyons, rising from coast inland to Cévennes (nearly 3700 ft.), and drained by Hérault, Orb, and Lez ; coal and salt (salt lagoons—*étangs*), olives, silk-worms, sheep, wines, brandies, liqueurs, cloth, glass, soap, and candles. Area, 2393 m Pop 488,285

Herefordshire, an inland county of W. England, and with chief town of the same name ; undulating, rising to 1000 ft., and drained by Wye and its tributaries, cattle, hops, and fruit gardens ; especially apples and pears for the manufacture of cider and perry. Town has manufactures of leather and encaustic tiles. Area of county, 537,363 acres. Pop 114,401  
Pop of town, 21 352.

Hernösand, a port of Sweden, near centre of Gulf of Bothnia coast ; excellent harbour, takes vessels of any size Imports coal, salt, sulphur, and live stock and provisions, exports timber of all kinds and wood-pulp and cellulose. Frozen from early in December to end of April Of 600,000 tons entered and cleared, about half is Swedish, 14 per cent. British, about the same Norwegian, and somewhat less German Distance from London, 1319 m ; Leith, 1220, Liverpool, 1670, Hull, 1225 ; Tyne, 1190. British vice-consul. Pop 8000

Hertfordshire, an inland county of S. England, with chief town of same name ; undulating surface, drained by Lee and Colne. Straw-plaiting and paper-making, chemical works at Great Berkhamstead, silk factories at Watford, and an important malt trade at Ware on the Lee, rose-gardens and cultivation of water-cress for the London market. Area of county, 406,161 acres. Pop 250 350 Pop of town, 9322.

Hesse, or Hesse-Darmstadt, grand-duchy of Germany, in the S W. of Prussia, consisting of Oberhessen (Upper Hesse,, Starkenburg on the E., and Rheinhessen on the W., of the Rhine. There are smaller detached portions. Oberhessen and Starkenburg are mountainous, while the uplands of Rheinhessen are laid out mostly in vineyards ; forests of oak, beech, and pine over nearly one-third, salt, iron and manganese ore, and lignite are the chief minerals, manufactures—chiefly in Mainz (Mayence), Worms, and Offenbach—include leather, cloth,

machinery, railway carriages and waggons, chemicals, paper, furniture, tobacco, cigars, wine, and musical instruments. Area, 2965 m Pop 1,120,000

Hesse Nassau, a province of Prussia, having the Rhine for its western boundary, and Saxony and Bavaria on the E., mountains rising to 2900 ft., drained by tributaries of Rhine and Weser ; rich in mineral springs, while iron, lead, manganese, copper, lignite, &c. are found, manufactures of machinery, earthenware, leather goods, ironware, chemicals, and textiles. Area, 6060 m Pop 1,698,000

Heywood, a town of Lancashire, 9 m. N. of Manchester, connected by a branch with the Rochdale Canal ; coalfield ; cotton manufactures, iron and brass foundries, manufactures of machinery, boilers, chemicals, and railway plant. Pop 25,461

Himalayas, a great mountain system of Asia, consisting of more or less parallel ranges extending along the whole of the N. of India, and separating that country from Chinese Turkestan and Tibet. It has a length of some 1600 m., and a breadth at the W of from 270 to 300 m., and at the E of 150 m ; and many of the peaks rise to over 26,000 ft., the best known, at the western end, being Mount Godwin-Austen (K2, 28,265), Nanga Parbat (26,620) S of the Indus ; in the centre, Dhawalagiri or Dhaulagiri (26,826), Mount Everest (29,002) ; and farther E. Kinchinjunga or Kanchanjanga (28,176) The range is crossed by many passes of from 11,000 to 19,000 ft. The rainfall along the S is very heavy, varying from 127 in. on the E. to 60 in. on the W., but as half of the total falls in July and August there are often destructive floods and landslips. The valleys beyond the first line of ridges are frequently much drier The snow-line on the S is about 16,200 ft. up, and on the N. about 18,600, but its absolute height is at many points affected by purely local conditions. The upper valleys have enormous glaciers. The districts of heavy rainfall have a great growth of timber, 7000 to 12,000 ft. up

Hindu Kush, a mountain system of Asia, lying beyond the Upper Indus, to the N.W. of the western end of the Himalayas, and extending from the Pamir plateau for some 365 m south-westward between India and Russian Turkestan, and through Afghanistan, and between the basins of the Oxus, and the Chitral, and Kabul. The peaks have an elevation of 20,000 to 23,000 ft., and the lower minor ranges give the system a width of some 200 m. There are a number of passes from 12,000 to 17,000 ft. high. Iron ore is abundant, and other minerals are found

Hiogo, or Hyogo, or Kohé, a port on the S coast of the main island of Japan, the most important in the country, and more important than any of the open ports of China except

Shanghai; harbour, 24 to 40 ft; dry dock, 400 ft long, excellent position on main railway line from N. to S. of island. Of a total import of over £13,000,000, about 40 per cent are from the British Empire (India contributing about half); United States, 27; China, 12; Germany, 9. The most dangerous competitor seems to be the United States. The chief imports are raw cotton (a little less than half of the total, about equally from United States, India, and China, but probably India may do more), metals and manufactures thereof, cotton yarn and piece goods, dyes, chemicals and medicines, wool and woollen manufactures (cloth mainly from the United Kingdom, but shoddy export is increasing, and flannels are no longer pure, while there seems no reason why France and Germany should hold the entire considerable trade in mousseline de laine), grains and seeds, kerosene (about four-fifths from United States, but Japanese oil increasing, and Russian trade falling off), machinery and sugar (Austria-Hungary pressing Germany keenly). Of exports valued at £7,000,000, about 45 per cent. go to the British Empire (two-thirds of this to Hong-Kong), 30 to China, and 18 to the United States. The chief exports are cotton yarn (about 25 per cent of whole), copper, antimony and other metals, matches, textiles and clothing, tea (practically all to United States and Canada), matting and straw-plait, rice; and jute, hemp, and cotton, carpets and rugs. Of over 5,000,000 tons entered and cleared, 40 per cent. are British, 32 Japanese, 11½ German, and 3½ each United States and French. Regular communication from London, Southampton, Middlesbrough, Liverpool, Glasgow, Vancouver, Seattle, and San Francisco. Distance from Yokohama, 350 m. British consul Pop 216,000

Hirschberg, a town of Prussian Silesia, 78 m by rail W S W of Breslau; fine lace Pop 18,000

Hitchin, a town of Hertfordshire, England, on the H17, 32 m by rail N N W of London, in a lavender district, straw-plait less important than formerly Pop 10,072

Hlaing See Rangoon.

Hoang Ho, or Hwang Ho (Yellow River), a great river of northern China, with a course of 2700 m and a basin of 358,000 m. For 500 years previous to 1851-53 it entered the Yellow

munication from London, Melbourne, Sydney, and New Zealand. Distance from London, 11,280 m; Liverpool, 11,205; Tyne, 11,560; Glasgow, 11,315; Wellington (New Zealand), 1250; Melbourne, 440; Sydney, 630. Letters, 34 days. Pop 25,000, or with suburbs, 34,500

Hoboken, a town in New Jersey, United States, on the Hudson, opposite New York, with a great shipping trade in coal, iron foundries and lead-pencil manufacture Pop 59,500

Hodaïda, or Hodeïda, a large town with a roadstead on Red Sea, in Yemen, Arabia, anchorage 5½ m off shore. Exports coffee, pearl-shell, senna, and myrrh, to India, and skins to America, imports grain, cotton goods, and petroleum. British vice-consul Pop. 30,000

Holland (Kingdom of) See Netherlands

Holland, North, and Holland, South, the two wealthiest and most thickly populated of the provinces of the kingdom of Holland, the first lying between the Zuyder Zee and the North Sea, and the latter extending along the coast to about the middle of the many mouths of the Maas, agriculture, cattle, dairy produce, and, through Amsterdam and Rotterdam, great amount of trade. Area of North Holland, 1070 m.; pop 984,000. South Holland, 1166 m, pop 1,171,500

Holyhead, a seaport of Anglesey, North Wales, on the small island of Holyhead or Holy Island, 264 m by rail N W of London, and 8½ W of Chester, extensive roadstead protected by a fine breakwater, and the new harbour admits vessels of all sizes. Holyhead is a terminal station on the London and North Western Railway, and has important mail communication with Ireland *via* Dublin. Distance to Kingston, 60 m, Dublin, 61, Greenore, 70. Exports ganister. Pop 10,072

Holyoke, a town of Massachusetts, on the Connecticut River, 8 m N of Springfield; river dammed to supply water-power. great seat of paper manufacture, and has also cotton and woollen mills Pop 46,000

Homestead, a town of Pennsylvania, United States, on the Monongahela, 8 m by rail S E of Pittsburg; great iron and steel works (Carnegie) Pop 13,000

Homs, or Hama, a town of Syria, on the



# VEGETABLE PRODUCTS.



CEREALS OF TEMPERATE ZONES—WHEAT, OATS, BARLEY, RYE RICE



amber, cotton yarn and cotton goods, sandal-wood, ivory, betel, vegetables, matches, live stock, and granite. Of over 17,200,000 tons, entered and cleared, 53 per cent are British, 18½ Chinese junks, 11 German, 7½ Japanese, and 2½ French. The imports from Hong-Kong to the United Kingdom are valued at about £1,000,000, the chief articles being hemp (dressed and undressed), silk and silk manufactures, tea, fruits and vegetables, preserved sugar, drugs, bristles, canes and sticks (unmounted), shells of all kinds, and spices of all sorts. The exports to Hong-Kong from the United Kingdom are valued at over £2,500,000, the chief articles being cotton piece-goods and yarn, iron (wrought and unwrought), woollens and worsteds and woollen and worsted yarn, coal, machinery, apparel and haberdashery, copper (wrought and unwrought), beer and ale, painters' colours and material, tobacco, and spirits. Postage, 1d per half-oz., postcards, 1d, parcels (by Peninsular and Oriental steamers), not over 3 lbs, 1s; between 3 and 7, 2s; between 7 and 11, 3s; by Marseilles or Brindisi, 1s extra in each case; telegrams, *vid* Turkey, 5s 5d, other routes, 5s 6d a word, money orders exchanged, mails from and to London once a week or oftener. Letters about 29 days, and parcels 35 *vid* Brindisi, 40 *vid* Vancouver. The British and Mexican silver dollars of 100 cents are worth nominally 2s, and the Chinese tael=10 mace=100 candareens=1000; cash=3s 4d. Besides British weights and measures the native ones in use are the tael=1½ oz.; picul=133½ lbs., catty=1½ lb., chek=14½ in., and cheung=12½ ft. As might be expected with such a sea-borne trade, there is regular communication not only with London, Liverpool, Southampton, Middlesbrough, and Glasgow, but with Japan, India, Australia, Vancouver, Victoria (British Columbia), San Francisco, Portland (Oregon), Seattle, and Continental Europe, while with Canton, Macao, and other Chinese ports there is almost daily communication. Distance from London, 9780 m., Liverpool, 9705, Tyne, 10,060, Cardiff, 9600; Glasgow, 9915, Shanghai, 870, Nagasaki, 1067, Yokohama, 1560, Manila, 650, Torres Strait, 2660, Saigon, 930, and Singapore, 1430. Pop. 284,000, of whom 275,000 were Chinese, and 182,000 were in Victoria. The population of the new territory on the mainland is, besides, about 102,000.

**Honiton**, a town of Devonshire, England, 17 m by rail E.N.E. of Exeter, lace; butter district. Pop 3271.

**Honolulu**, the chief town of Hawaii or the Sandwich Islands, on the S coast of the island of Oahu, of which it is the principal port, excellent sheltered harbour, not large, but with 16 to 27 ft of water at low tide; coaling station. Imports coal, manufactured goods, and

general merchandise; exports coffee, sugar, wool, rice, bananas, pine-apples, hides, tallow, &c. Regular communication from London. Distance from London, 13,330 m.; Liverpool, 13,255, Glasgow, 13,365, Vancouver, 2410, San Francisco, 2095; Sydney, 4550 (*vid* Fiji), Auckland, 3870 (*vid* Samoa). For postage, see Hawaii. Letters, 18 days. British consul. Pop 39,500.

**Hooghly**, or **Hugli**, the most westerly of the mouths of the Ganges, and that up which traffic passes to Calcutta, rapid and dangerous tide rush, especially during the monsoon, when there is sometimes a current of 22 m an hour, and a bore 7 ft high, dangerous James and Mary sands (quicksands) a few miles below Calcutta, where Damodar and Rupnayan enter, vessels of 26 ft can go up.

**Hook of Holland**, a point, and a port, at the mouth of the New Cut, or New Waterway from the North Sea to Rotterdam (17 m). Communication with Harwich (100 m) daily—railway passenger steamers.

**Hörde**, a town of Westphalia, Prussia, 2½ m. by rail S.E. of Dortmund, with coal and iron mines, blast-furnaces, and iron, steel, and zinc works. Pop 25,500.

**Horsens**, a seaport of Jutland, Denmark, on the Cattegat, 32 m by rail S.S.W. of Aarhus, harbour takes vessels up to 18 ft. Exports corn, cattle, butter, eggs, bones, and tallow. Regular communication from Newcastle. Pop 22,500.

**Horwich**, a town of Lancashire, England, 4 m W.N.W. of Bolton, coal in neighbourhood, Lancashire and Yorkshire Railway works, making of articles of terra-cotta. Pop 15,083.

**Houston**, a town of Texas, United States, on the Buffalo Bayou River (which is navigable for vessels drawing 9 ft) and 49 m by rail N.W. of Galveston. It is the most important railway centre of the state, and has manufactures of machinery, railway carriages, agricultural implements, iron goods, manures, cotton-seed oil, &c., considerable shipping trade in cotton, cattle, grain, and pine and its various products. Pop 45,000.

**Howrah**, a town on the Hooghly, opposite Calcutta, to which there is a floating bridge, terminus of East Indian Railway, cotton and other manufactures. Pop 158,000.

**Huancavelica**, a mountain department of Peru, with a town of the same name, 150 m S.E. of Lima, gold and silver deposits and valuable quicksilver mines. Area of department, 9251 m. Pop 224,000, pop of town, 5000.

**Huanchaco**, a small and dangerous port of N Peru, exporting sugar and alcohol to Chile, sugar to United Kingdom and United States, and hides to France.

**Huasco**, a port of Atacama, Chile, at the

mouth of the river of the same name; vessels anchor in 5 fathoms about half a mile from the shore, northern limit of vine in Chile, famous for grapes and raisins; exports copper. Pop 2090.

Huddersfield, a town in the West Riding of Yorkshire, England, near the Colne, 17 m. by rail S W of Leeds, and 203 N. N W of London. On an extensive coal-field, it has good communication by railway and canal, and is now the chief seat of the "fancy" woollen manufactures—mixed worsted, silk, and cotton, broadcloth, doo-blins, coatings and trousseings, cotton and silk yarn, foundries, and machinery. The Huddersfield Canal (23½ m) communicates with the Manchester Ship Canal, and with the Rochdale Canal between Halifax and Dewsbury. Pop 95,008

Hudiksvall, a port of Sweden, on the Gulf of Bothnia, about 60 m. N. of Gelle, depth at quays 17 ft., and good anchorage in 10 to 12 fathoms. Imports coal, salt, sulphur, artificial manures, and petroleum; exports iron and steel, deals, baulks, battens, pit-props, flooring, wood-pulp, &c. Of 350,000 tons, entered and cleared, the great bulk is Swedish and Norwegian, but Great Britain has 9 per cent., Denmark 10, and Germany 6½. British vice-consul. Pop 5000

Hudson, a river of the state of New York, United States, rising in the Adirondack Mountains, and flowing into New York harbour, with a course of 350 m., and a basin of over 16,000. Navigable for large vessels 117 m. up to Hudson, for fur-sized steamers to Albany (run daily) 142 m., and for smaller vessels to Troy 151 m., beyond which the tide does not flow. There is canal connection with the Delaware River (Delaware and Hudson Canal), Lake Erie (Erie Canal), and Lake Champlain (Champlain Canal). The first successful experiment in steamboat navigation in America was made on this river by Fulton in 1807. The river port of Hudson is on the left bank, as already noted, it has iron foundries and miscellaneous manufactures. Pop 10,000

Hudson Bay, a great inland sea of N E North America, 900 m from N to S., 600 across at the widest part, with an area of some 500,000 m. and an average, and pretty general, depth of some 70 fathoms. It receives by the Churchill, Nelson, Albany, and other rivers, the drainage of some 3,000,000 m. of northern Canada. Its commercial importance is connected with the proposals to make it an outlet for the grain from the N W provinces of Canada, by the valley of the Nelson to Fort Nelson, 650 m. from Winnipeg, a route 775 m. shorter than that by Montreal, and 1120 shorter than that by New York. The difficulty lies in the navigation of Hudson Strait, 500 m. long, connecting the Bay with the Atlantic, which the presence of drift ice renders im-

possible or dangerous except for three months every year. The Bay itself is in winter frozen for only some 10 m. from the coast. The Hudson Bay Company have it even while a trade in furs and fish-oil.

Huelva, a frontier province of S.W. Spain, with a town of the same name, the latter, 64 m. by rail W S.W. of Seville, near the junction of the Odiel and the Rio Tinto, has an anchorage in the river; depth on bar, 20½ to 24½ ft. at high water, but vessels are not allowed to cross should they draw more than 18 to 22 ft. Huelva is the port for the Rio Tinto copper mines, and there are industries of straw-plait manufactures and fishing. Imports coal and coke, pig iron and iron and steel manufactures, machinery, tin, naphtha, wine casks, &c.; exports copper and copper ore, iron and copper pyrites, wine (mostly to France, considerable quantity also to Germany), cork, manchine &c. &c. The coal, coke, iron and steel, machinery, tin, &c., are sent mostly from the United Kingdom; and nearly the whole of the ore is sent to the United Kingdom. Of a tonnage of over 1,700,000, entered and cleared, 54½ per cent. are British, about 29 Spanish, and slightly less than 6 German. Regular communication from London, Glasgow, and Port Talbot (four days). Distance from Tyne 1500 in British vice-consul. The province has deposits of iron and copper, fisheries, wines, oranges, chestnuts, oaks, cork, &c. Area of province, 4122 m. Pop 254,000, pop of town, 23,000.

Hull, or Kingston-on-Hull, a port of the East Riding of Yorkshire, on the N. side of the Humber, about 20 m. from the sea, 42 m. E.S.E. of York, and 173 m. N. of London. There are many docks, the deepest having from 12 to 34 ft. at entrance, according to the state of the tide. In the estuary there is a depth of 40 ft. at low tide. There are graving docks, varying in length up to 550 ft., and in depth up to 21½ ft. From the position of the port with regard to the Continent there is a very large amount of trade with the whole of northern Europe, and here too is the natural outlet for the manufactures of the Yorkshire coalfields, and to the Continent for those also of Lancashire. There is naturally a considerable fishery, large yards for shipbuilding and the manufacture of ship requisites, sugar refining, and oil and chemical manufacture. The total tonnage, entered and cleared, is about 4,600,000, of which 3,000,000 are British. The imports are valued at about £20,000,000; the exports at about £22,500,000 (British, £17,000,000). The great imports are wheat and other grains (20 per cent. of whole), butter (10 per cent.), cotton, flax or linseed and other seeds, timber, wool, sugar, ham and bacon, iron and steel and manufactures thereof, raw cotton, eggs, fish, lard, margarine, paper (including straw board), raw

vegetables, petroleum, oranges and other fruits and nuts, raw hides, implements and tools, seed and other kinds of oil, oil-cake, paper-making materials, rags for shoddy, cattle, cordage, cotton manufactures, aniline and other dyes, rice, glass manufactures, hair, hemp, leather, artificial manures, crude zinc, painters' colours, goat-skins (undressed), and woollen yarn. The chief exports of British and Irish produce are machinery, coal, cotton piece-goods, cotton yarn, woollen and worsted yarn, wool, woollen and worsted manufactures, iron and iron and steel manufactures, implements and tools, hardware and cutlery, manufactures of caoutchouc, earthen and china ware, leather (unwrought and wrought), jute piece-goods, copper (unwrought and wrought), and oil- and floor-cloth. The chief articles of re-export of foreign and colonial merchandise are raw cotton, caoutchouc, lard, wool, hardware, bacon, fish, raw fruit, and machinery. Regular communication with practically every part of the world. Distance from London, 280 m; Leith, 272, Hamburg, 440, Christiania, 640, Copenhagen, 680, Bergen, 570, Trondhjem, 870. Pop 240,618.

**Humber**, the estuary of the Trent and the Yorkshire Ouse, on the E. coast of England, 38 m long, and 1 to 7 wide. Hull can be reached by largest vessels, farther up there is passage for small vessels, and by navigable streams and canals there is communication with the Mersey, the Severn, and the Thames.

**Hunan**, a central province of southern China, in the Yang-tse-kiang basin, mountainous in S, flat and fertile in N, coal, tea, rice. Area, 74,400 m. Pop 21,000,000.

**Hungary**. See Austria-Hungary.

**Hunter**, a river of New South Wales, Australia, 300 m long, flowing through a great coal-field.

**Hupe**, or **Hupéh**, a province almost in centre

of China; surface flat except in W., and drained by Yang-tse-kiang and Han-kiang, irrigation; forests; coal, iron, tin, mercury, copper, rice, tea, cotton, fruits; cotton spinning and weaving, and paper-making. See also Hankow and Ichang, which are in this province. Area, 65,900 m. Pop 34,245,000.

**Huron**, the second largest of the great lakes of North America, lying between Michigan (United States) and Ontario (Canada). The northern and north-eastern portion, Georgian Bay, is almost cut off from the main lake by the Cabot's Head Peninsula and Grand Manitoulin Island of Ontario. It is 263 m long, 105 m wide at the widest part, has an average breadth of 70 m, an area of 23,800 m, a mean depth of some 250 ft, a maximum depth of 750, a mean elevation of 580 ft above sea-level, and is subject to violent storms.

**Hyde**, a town of Cheshire, England, 7 m ESE of Manchester, on a coal-field, with manufactures of cotton and felt hats, and with boiler and engine shops. Pop 32,768.

**Hyderabad**, **Haidarabad**, or the **Nizam's Dominions**, a great native state in the centre of southern India, with a chief town of the same name. The drainage is carried off by the Godavery, Kistna, and their tributaries. Products are wheat, maize, millet, cotton, indigo, sugar-cane, mustard, castor-oil, melons, pine-apples, grapes. Imports cotton cloth, hardware, salt, and timber, exports cotton and other products, oil-seeds, cloth, hides, and metal wares. The town is 390 m by rail NW of Madras. Area of state, 82,698 m. Pop 11,141,500, pop of town (with suburbs), 448,500.

**Hyderabad**, the chief town of Sind, 3½ m. E of the left bank of the Indus about 115 m from its mouth, and 90 m by rail NE of Kurrachee; manufactures of silk, gold and silver work, and lacquered ware and pottery. Pop. 69,500.

## I

**Ibraila**. See **Braila**.

**Iceland**, an island belonging to Denmark, in the Atlantic Ocean, lying between 63° 23' and 66° 33' N, and between 13° 22' and 24° 15' W, 500 m N of Scotland, and 600 m NW of Norway. The Arctic Circle passes through the extreme N. The greatest length from E to W. is 300 m, the width 200 m, and the area 39,756 m. Except on S, the coast-line is broken by bays and fiords. The whole island is volcanic, the centre being a more or less barren tableland, with an average elevation of 2000 ft, and a highest point of 6431 ft. Communication on pony-back. Pasture round coast and along river valleys, and valuable fisheries off coasts. Coal and sulphur, but neither of them

worked. The imports, valued at about £450,000 (general goods), come mostly from Denmark, except coal, salt, cotton and linen goods, and hardware, in which the United Kingdom has a large share, though the shipments (especially of hardware) are made *via* Copenhagen, the same is the case with the ready-made clothing, which is mostly of German origin. Timber is sent from Sweden and Norway. Altogether Denmark has some 67 per cent of the total, and the United Kingdom 23. Of the total export, valued at over £400,000, Denmark receives some 35 per cent, and the United Kingdom 33. The chief exports are salt cod (sent to Denmark for Spain and Italy), whale oil (United Kingdom, Norway, and Sweden), wool

and salt fish (Denmark and United Kingdom), ponies (United Kingdom), and salt mutton (Denmark) The chief and only town is Reikjavik, on the S coast, where there is a natural harbour with a depth of 24 ft. at low water, but no quays accommodation Of a tonnage of some 140,000, entered and cleared, nearly 43 per cent are British Regular communication with Leith in summer Distance, 950 m. Postage as for Denmark, time about 6 days in the season, money orders both ways British consul at Reikjavik, and vice-consul at Seydisfjord Pop of Reikjavik, 6000, pop of island, 71,000

**Ichang**, a Chinese port on the Yang-tse-kiang, 370 m from Hankow, and 970 from Shanghai, only vessels of light draught can enter the port, and there is no dock accommodation of any sort, goods for the interior must be transhipped to junks Total trade valued at nearly £4,000,000 Imports from abroad cotton yarn (Indian and Japanese), grey and white shirtings, cotton lastings and Italians, American ginseng, aniline dyes, sheetings (British and Indian), Spanish stripes and other woollen cloth, English and Bombay drills, and silk and cotton ribbons of native origin, cotton yarn, raw silk, cocoon refuse, and silk piece-goods, musk, medicines, white wax, goat skins, hides, wool, and lead, exports copper, rice, hides, hemp, vegetable tallow, varnish, goat-skins, and galls Of some 400,000 tons, entered and cleared, 37 per cent. are British, 43 Chinese, and 15 Japanese. British consul. Pop 35,000.

**Idaho**, one of the states of the United States, lying along the Rocky Mountains The surface is a rugged tableland, rising from 2000 ft. in the W to 10,000 in the E The S and SW are desert, the former with deep river cañons, and the latter covered with deposits of alkali Drainage carried off by the Shoshone, Salmon, Clear, and other tributaries of the Columbia Considerable amount of forest, irrigation in S, rich deposits of lead (especially along Shoshone), silver, gold, copper, iron, coal. Area, 84,290 m. Pop. 162,000

**Idria**, a town of Carniola, Austria-Hungary, 23 m SW of Laibach, with important quick-silver mines, and also deposits of iron and copper Pop 5500

**Ilkeston**, a town of Derbyshire, England, 7½ m N.E. of Derby; coal and ironstone in the neighbourhood, blast-furnaces, ironworks, manufactures of stone bottles and earthenware, hosiery, silks, and lace. Pop 25,383

**Ill**, a river of Alsace-Lorraine, Germany, flowing to Rhine, canalised for over 60 m

**Illinois**, a central-northern state of the United States, stretching for about 100 m from Lake Michigan on the N to the confluence of the Ohio and Mississippi on the S; area, 56,600 m From the level character of

its surface Illinois is known as the "prairie state," and in agricultural produce it is the richest in the republic The soil is very fertile, and the climate excellent Large deposits of coal and salt, lead and limestone are also found In production of coal in United States second to Pennsylvania, the total output being over 26,000,000 tons, with 40,000 men employed underground Pop 4,822,000

**Ilo-ilo**, a seaport of the Philippines, with a good harbour, having 17 ft on the bar at high water of neap tides Imports rice, petroleum, coal, and general goods, exports sugar (the staple), hemp, &c Of some 190,000 tons, entered and cleared, 63 per cent are British, 17 German Regular communication from Liverpool British vice-consul Pop 12,000

**India** —*Surface and Size*—India is the central peninsula of southern Asia, forming with adjoining districts to the NW and E a vast and densely populated empire ruled by Great Britain It lies between 8° and 38° N and between 67° and 101° E, or excluding Burma 95° E, and is bounded NE by Tibet, N by Russian and Chinese Turkestan, NW by Afghanistan and Baluchistan, SW by the Arabian Sea, and SE by the Bay of Bengal Its length from N to S is about 2000 m, the width, from near Kurrachee to the E end of Assam, about as much, the area is about 1,300,000 m (exclusive of Burma), and the coast-line about 2000 m The main lines of the physical geography are very simple Starting from the Pamir, in the extreme N, the Karakoram Range and the mighty mass of the Himalayas curve round along the NE, while the Sulaiman and other ranges of Afghanistan and Baluchistan pass along the NW To the S of all these, in the shape roughly of an inverted V, is a great lowland plain 150 to over 300 m wide, and comprising the Valleys of the Ganges and lower Brahmaputra on the NE, and that of the Indus on the NW In the centre, stretching N from the Kathiawar Peninsula, are the Aravalli Hills, and extending right across country from the Gulf of Cambay to near Benares are the Vindhya Hills and the Kaimur Hills, immediately S of which, on the W, is the valley of the Nerbudda, and on the E. that of the Son, a tributary of the Ganges Immediately S of these are the Satpura and Mahadeo Hills, and from this line the great central plateau of the Deccan stretches southward with an average height of 1500 to 2000 ft, and with the Western and Eastern Ghats along its borders These two ranges meet in the S at the Nilgiri Hills, immediately S of which the Palghat Gap (1000 ft, with the hills on each side rising to 8500 or more) affords the only easy access from E to W for over 700 m To the S of this, and extending to the extreme S. of the peninsula are the Anamalai and Cardamon Hills. Except in the extreme

where the Tapti passes westward between the Satpura Hills and the northern end of the Western Ghats, the drainage of the Deccan is carried off eastward by the Maharah, Godavary, Krishna (or Krishna), Cauvery, and a number of smaller streams. With such range of latitude and height the climate, of necessity, shows greater variety, from the eternal snows of the Himalayas to the intense and moist heat of the plains, and the dry, but still considerable, heat of the plateau, and additional modification takes place from the insular position of the S., and the continental conditions of the N. The mon-soons are generally spoken of as the S.W. (summer) and N.E. (winter); but while these indicate the directions from which the winds start, the exact direction in which they may blow, in any given district, is largely modified by surface configuration. Even the three seasons into which the year is so often divided—hot, wet, and cool, the first from March to May, and the second from June to October, later in southern Madras—hold good only in certain districts. The average rainfall varies from a little over 8 inches in Sind and Cutch, to 12 in Rajputana, 21½ in the Punjab plains, 31 in the North Deccan, 40 to 60 in Central India, western Bengal, and Orissa, 65 in Lower Bengal, 95 in Assam and Cachar, 111 in the Eastern Ghats, 139 in the Western Ghats, and 152 to 173 in Lower Burma, while among the Assam Hills it is said to reach 600 to 600 in. Owing to the density of the population, and the great evaporation, any failure of the regular rains is disastrous, and leads to serious famine.

*Government, &c.*—Indian affairs in this country are managed by a Secretary of State for India and a Council, and in India itself by a Governor-General, or Viceroy, with a Council, while two provinces have governors, four have lieutenant-governors, and six have chief commissioners. Under these, administration is carried on by a large body of British civil-servants. The railway mileage is 25,214, and some 2300 m more are under construction. There are large numbers of serviceable roads, and the rivers are in some cases available for water-carriage. Canal navigation has been tried on part of the 12,000 m of main irrigation canals, but not with much success—the channels designed for the one purpose did not readily lend themselves to the other. The pop is 231,085,500 in British India, and 294,267,000 in the whole country. Of these 60 per cent are dependent on agriculture, about 9 on general labour, nearly 5 on processes dealing with food and drink, 4½ on the production of textiles and articles of dress, and 4 act as household, &c., servants.

*Productions and Resources.*—It is thus evident that India is, in the main, an agricultural country. Of a total area of 732,300,000 acres,

615,000,000 are in British India. Of these 137,500,000 are not available for cultivation, 109,000,000 are waste lands that might be cultivated, 67,100,000 be fallow, 65,400,000 are under forest, and 150,200,000 acres are under crop; but as 22,700,000 acres of the crop produce two or more crops in the course of the year, the crop area might be put at 201,900,000 acres. Of these 37,500,000 require irrigation more or less, and over 13,000,000 have regular supply from 12,000 m of main canals and 31,000 of distributaries. Of the 201,900,000 acres under crop, 72,800,000 are under rice, 38,400,000 under millet and maize, 16,100,000 under wheat, 7,800,000 under chick-peas, 6,000,000 under barley, 23,300,000 under food grains and pulse, and 6,300,000 under orchards, gardens, and miscellaneous food-stuffs, 2,800,000 are under sugar, 600,000 under tea and coffee, 10,300,000 under oil-seeds (linseed, rapeseed, mustard, and sesamum), 8,100,000 under cotton, 2,500,000 under jute and other fibres, 1,000,000 under indigo, 600,000 under poppies (for opium), 900,000 under tobacco, and 5,500,000 under fodder and other miscellaneous non-food crops. The number of cattle is estimated at 112 millions, of sheep and goats at 43,000,000, and of horses, mules, donkeys, &c., at nearly 3,000,000. Of the crops of value for export and commerce, as apart from food, more than half of the rice is produced in Bengal, after which come Madras and Burma, each with about one-twelfth. One-third of the wheat area (wheat being a very sickle export, varying from 2500 tons to 1,500,000 tons), is in the Punjab, after which come the N.W. Provinces and Oudh (over one-fifth), and the Central Provinces and Bombay (about one-tenth each). The sugar area is mainly in the N.W. Provinces and Oudh (over 40 per cent.), Bengal (30), and the Punjab (13). The tea comes chiefly from Assam (over 60 per cent. of the area, and more than 70 of the production of over 197,000,000 lbs), and Bengal. Of the coffee, Mysore has half the area, and the other important districts are Coorg, Madras, Travancore, and Cochin. The great oil-seed districts are Bengal, the Central Provinces, Bombay, and Upper Burma, the value of the export being over £5,000,000. Cotton is chiefly grown in Bombay, Sind, and the Bombay native states (about one-third or more among them), Berar, Madras, Nizam's Dominions, the N.W. Provinces and Oudh, and the Punjab. Almost the whole of the jute crop is grown in Bengal. The chief indigo districts are Bengal (nearly half), Madras, and the N.W. Provinces and Oudh, while a much smaller quantity comes from the Punjab. The area under this crop has, in recent years, been falling off in consequence of the competition of the German synthetic product and the resulting fall in price. Opium (Malwa) comes from Rajputana

and Central India. Some 5000 acres are under cinchona, nearly one-third in the government plantations at Darjeeling, and one-sixth in those in the Nilgiris. The chief millet regions are Bombay and Berar. Including the whole of India, the state forests and reserves cover a total area of, probably, nearly 200,000 m, the trees being teak, pine, sandal-wood, sal, rubber, bamboo, cane, &c.—all for timber and export purposes, besides a supply of firewood, charcoal, &c. Spanish chestnut is being tried in the Punjab, and eucalyptus on the Nilgiri and Palmi Hills. The provinces with the largest areas are Madras, Central Provinces, Burma, Bombay, and the N W Provinces and Oudh. There are important deposits of coal, iron, mineral oil, and gold, and the ruby mines of Burma turn out gems valued at nearly £100,000 a year. Of an output of 6,118,000 tons of coal, over 80 per cent. come from Bengal (Giridih in the Karhaibari field &c.), while the bulk of the remainder come from the Nizam's Dominions (Singareni), Assam (Makum), Central Provinces (Warora), and Central India (Rewah State). There is no lack of iron ore, but it is difficult to find it in proximity to good coal and limestone. The 63,000 tons produced come almost entirely from Raniganj in Bengal, and the only iron-works are those at Barrakur in Bengal, which have an output of about 23,000 tons of pig-iron a year, and where the manufacture of steel is to be started. The manufacture has possibilities, but, meanwhile, iron and iron ware can be in most cases imported more cheaply from Europe. Of 33,000,000 gallons of crude petroleum 87,000,000 come from Burma (Yenangyat and Yenangyaung), and the bulk of the rest from Assam. More than double this amount still requires to be imported (mainly from Russia) to supply the demand. The gold output of Mysore is valued at £2,000,000 a year. Salt is got from a number of coast districts, from salt lakes (Sambhar, &c.), salt pits, and brine springs, in Rajputana, and from salt mines and brine springs in the Punjab, but the amount produced is far from equal to the demand, and there is a considerable quantity imported from the United Kingdom, and the Red Sea and Persian Gulf, and a smaller amount from Germany. Saltpetre and mica are obtained from Bengal. Domestic industries—spinning and weaving (cashmere and other shawls, carpets, rugs, figured silks, &c.), pottery, brass and copper work, iron work and art work of many other kinds, ivory, gold, silver, carved wood, &c.—though still common in their ancient forms all over the continent have been for years giving way before the competition of the cheaper cotton yarns and tissues, and the iron and steel products of Britain and other foreign countries, and of the fabrics made in India itself in large factories. Cheap labour, and

the production of the raw material have led to the establishment of a number of large industries in the spinning and weaving of cotton and jute, the making of paper, the husking and cleaning of rice, and the sawing of timber. There are nearly 200 cotton mills, with over 40,000 looms, and nearly 5,000,000 spindles—73 per cent. of the mills, 78 per cent. of the looms, and 72 per cent. of the spindles in the Bombay Presidency—which use up about half of the whole production of raw cotton. Madras has 76 per cent. of the finer goods. Jute goods are produced from over 15,000 looms, and over 300,000 spindles—almost entirely in Bengal, and mainly round Calcutta—and two woollen mills (Cawnpore, and Dhariwal in the Punjab) turn out blankets, serges, and the cloths worn by the army and the police. There are also paper mills, breweries, bone-crushing works, dye-works, lac factories, oil mills, rice mills, rope factories, silk winding and weaving establishments, tanneries, sugar factories, tobacco and cigar factories, and timber mills all carried on after western methods.

*Trade, &c.*—The private imports by sea are valued at over £61,000,000, of which nearly £51,000,000 are for merchandise and the rest treasure, and the private exports by sea are some £70,000,000 for Indian merchandise, over £2,000,000 for re-export of foreign merchandise, and £5,000,000 for treasure. The government import and export of stores and treasure are valued at over £13,000,000, and there is a land import of over £4,500,000, and land export of nearly as much. Of the imports 36 per cent. are cottons; while metals and hardware, and sugar are between £5,500,000 and £3,500,000, and silk (raw and manufactured), oils (chiefly petroleum), cotton yarns, machinery and mill work, chemicals (including medicines and dyes), woollen goods, provisions, liquors, apparel, and railway material are all between £3,000,000 and £1,000,000. The leading exports are jute (over £7,000,000) and jute goods (over £5,000,000), rice, hides and skins, raw cotton, tea (very largely to the United Kingdom, next to Australia), opium, and oil-seeds—all between £9,000,000 and £6,000,000, cotton yarns (about £4,000,000), indigo (about £1,000,000, mostly to China), cotton piece-goods, raw wool, and wheat—the last varying in different years from over £6,000,000 to £20,000. Of the whole trade 65 per cent. is direct with European countries, and of this the United Kingdom has 67 per cent., or about 45 per cent. of the total, Germany comes next with some 6, and then follow France, Belgium, Austria-Hungary, Italy, and Russia. China has about 8 per cent., the Straits Settlements  $5\frac{1}{2}$ , the United States less than 5, Ceylon over 3, and Japan about the same. Of the imports Bengal receives 42 per cent., Bombay and Sind 40,

Madras  $8\frac{1}{2}$ , and Burma 9, while of the exports Bengal sends 50 per cent., Bombay and Sind 30, Madras 10, and Burma 10. Of the imports Calcutta receives 42 per cent, Bombay 35, Kurrachee 6, Madras 7, and Rangoon 8, and of the exports Calcutta sends  $50\frac{1}{2}$  per cent, Bombay 26, Kurrachee 5, Madras 5, and Rangoon  $6\frac{1}{2}$ . The total value of the import of British produce into India is about £34,000,000, of which more than £20,000,000 are for cottons; while iron is worth £3,000,000, machinery £2,000,000, and cotton yarn over £1,500,000. The other leading articles besides those already mentioned are painters' colours and materials, coal, leather and leather goods, umbrellas, books, salt, stationery, linen, glass ware, and tobacco, and there is also a receipt of re-exported foreign and colonial merchandise valued at £800,000. The exports sent to the United Kingdom are worth some £27,500,000, of which jute and jute goods, and tea, are each valued at between £6,500,000 and £5,000,000; and, besides most of the articles already mentioned in the general exports, leather (over £2,000,000), timber, lac, cordage, myrobalans, bones (for manure), tin, manganese, hemp, mica, raw silk, and carpets and rugs are of importance. The mercantile marine has a tonnage of over 64,000, the annual tonnage, entered and cleared, in the foreign trade is over 8,000,000, and there is a coasting trade of 25,000,000 tons entered and cleared.

*Money, &c*—The unit of account is the rupee, worth in India 2s, but for exchange 15 Rs = 20s, a pie = one-twelfth of a penny, a pice = a farthing; an anna = 1d; a lac = 100,000 rupees, a crore = 10,000,000 rupees; Bengal maund = 40 seers = 82 28 lbs avoirdupois, Bombay maund = 28 lbs, Madras maund = 25 lbs, tola = 180 grains, Bengal guz = 36 in; the legal ser = a kilogramme has never come into use. Mails from and to London every week, letters, 1d per half-oz, postcards, 1d; parcels direct, not over 1 lb, 1s, between 1 and 2, 1s 8d, between 2 and 3, 2s 4d, between 3 and 7, 3s 6d, between 7 and 11, 5s, *via* Marseilles or Brindisi, not over 3 lbs, 3s; between 3 and 7, 4s 6d, between 7 and 11, 6s, money orders to and from; telegrams, *via* Turkey, 3s. 8d. a word, other routes, 2s 6d.

Indiana, a state of the United States, S of Lake Michigan, on which it has some 60 m of coast, undulating surface, drained by Wabash and its tributaries, large area of timber; maize, wheat, flax, sorghum, vine, apples, peaches; coal, iron, limestone, natural gas; excellent communication of all kinds; extensive manufactures—woollens, agricultural appliances, pork-packing. Area, 35,910 m. Pop 2,516,500.

Indian Ocean, one of the five great sea divisions of the globe, extending from India

and Arabia southwards to the great Southern Ocean, and bounded E by Burma, the Asiatic Archipelago, Australia, and Tasmania, W by Arabia and Africa, and S by a line drawn from the S of Tasmania to Cape Agulhas. The bed slopes in general steeply to 2000 fathoms, which is reached about 120 m from land, and gradually deepens towards the E and S, the extreme depth of 3393 fathoms being reached near Java. The mean depth is about 2000 fathoms, and the area about 17,500,000 m. The chief current circulation goes northward along the W coast of Australia to the Asiatic Archipelago and the Bay of Bengal, and then westward to the African coast, along which it passes by the Mozambique Channel round the S end of Africa to aid in forming the Southern Atlantic current.

Indianapolis, capital of the state of Indiana, United States, 195 m by rail S S E of Chicago, grain, live stock, pork-packing, flour mills, iron foundries, and manufactures of cotton, woollens, furniture, tiles, &c. Pop 169,500.

Indore, chief town of the native state of the same name in Central India, opium centre and cotton manufactures. Area of state, 9716 m. Pop 1,094,500, pop. of town, 87,000.

Indus, a river in the north-west of India, rising in Tibet at a height of about 16,000 ft, and flowing to the Arabian Sea, with a course of 1800 m, and a basin of 373,000 m. At Attock, 48 m within the Punjab, it receives the Kabul River, and thenceforward is navigable, in some degree, to its mouth. The Punjab is drained by its five great tributaries, the Sutlej, Beas, Ravi, Chenab, and Jehlam, all of which may be utilised by small craft as far as the mountains. In its lower course it receives no important tributaries, and loses so much by evaporation, that its volume is actually lessened. It has a barren delta, with a coast-line of some 125 m, to the W of which stands the port of Kurrachee, connected with Lahore, in the Punjab, by rail.

Inhambane, a seaport of Portuguese East Africa, half-way between Lorenzo Marques and Beira, and just below the Tropic of Capricorn. Safe harbour, with depth on bar of 16 ft at low, and 27 ft at high, water of spring tides. Imports general goods, exports india-rubber, wax, copra, and oil-nuts (*maffoureira*). Regular communication from Southampton. Distance from Delagoa Bay, 260 m, from Beira, 255 m. British vice-consul. Pop 3300, almost entirely natives.

Inn, a river of central Europe, forming for the last 50 m of its lower course to the Danube the boundary between Bavaria and Austria-Hungary, and thus far navigable for steamers; course, 320 m.

Invercargill, a town of the South Island of New Zealand, in the province of Otago, on the E side of the estuary of New River Harbour, about 10 m. from the bar, and 139 by rail S W.

of Dunedin, vessels of 10 ft up to town, depth on bar 18 ft at low water; frozen mutton and frozen fish, and oysters, foundries, saw mills, flour mills, boot factories, breweries, &c. See Bluff Harbour. Pop 10,000

**Inverness**, the chief town of the county of same name in N of Scotland, entrance to Caledonian Canal; small manufacture of woollens, and coasting trade, coast fishing. Distance from Leith, 220 m. County rugged, reaching in Ben Nevis 4406 ft, the highest point in the United Kingdom, many deer forests, and grouse moors. Area, 2,695,037 acres. Pop 90,104, pop of town, 23,066

**Ionian Islands**, a chain of some forty islands in the Mediterranean, off the W. coast of Greece, and the S E of the Peloponnesus. Total area, 1010 m. Pop 253,000. The *Ionian Sea* is the part of the Mediterranean between Greece and European Turkey and Italy and Sicily, off which the Gulfs of Taranto, Arta, and Patras open

**Iowa**, a state of the United States, undulating prairie with average elevation of 900 ft., drained by tributaries of Mississippi and Missouri, large extent of forest, maize, oats, barley, buckwheat, rye, flax, sorghum, wool, dairy produce, and live stock; agricultural products from some 23,000,000 acres valued at £60,000,000, flour and grain mills, meat packing and canning, lumber trade, agricultural implements, boots and shoes, coal, gypsum, lead, zinc, and limestone. Area, 55,475 m. Pop 2,232,000

**Ipswich**, the county town of Suffolk, England, on the Orwell, 11 m from the sea, tidal river harbour, but wet dock has 17 ft, farm implements, manures, and railway carriages. Imports grain, timber, coal, pyrites, phosphate of lime, &c., exports iron, farm implements, machinery, fertilisers, grain, oil, bricks, roots, &c. Distance from Leith, 350 m. Pop 66,622

**Iquique**, a port of Chile, chief town of the province of Tarapacá, anchorage in 11 fathoms about 2 m. off shore, which is very rocky, vessels discharging and loading by launches, amalgamating works in connection with neighbouring silver mines. Imports coal and manufactured goods, exports copper ore, silver ore and silver bars, nitrate products, borate of lime, and hides. Regular communication from London. British consul. Pop 42,500

**Irawaddy**, a great river of Burma, and one of the great rivers of S E Asia, delta 170 m long, with a coast of 160 m, navigable to Bhamo, some 800 m up, great quantities of rice grown, timber, river trade valued at nearly £3,000,000

**Irbis**, a town of Perm, Russia, 110 m. N E of Ekaterinoslav, with an annual fair in February for interchange of Siberian products (value of trade, £5,000,000)—textiles, metal

goods, and provisions, tea, hides, tallow, wool, furs, &c. From the Nitsa, on which it stands, there is steamer communication with the Tobol, Irtysh, and Obi. Pop 20,000

**Ireland**.—*Surface and Size*—Ireland is an island of the United Kingdom, lying to the W. of Great Britain, between  $51\frac{1}{2}^{\circ}$  and  $55\frac{1}{2}^{\circ}$  N., and between  $5\frac{1}{2}^{\circ}$  and  $10\frac{1}{2}^{\circ}$  W., and bounded N, S, and W, by the Atlantic Ocean; N E. by the North Channel (separating it from Scotland, Mull of Kintyre 14 m), and the opening from this southward into the Irish Sea (distance to S.W. of Scotland 22 m), and E. by the Irish Sea and St George's Channel (44 to 86 m) between it and England and Wales. The extreme length is about 300 m, the width 170, the area 32,600 m, or about 20,300,000 acres (exclusive of 600,000 acres of water), and there is a coast of probably 2200 m., with an outline so winding, especially on the N, W, and S, that no place is more than 50 m from the sea. The pop is 4,458,775, or 137 to the m, the proportion varying in the ordinary agricultural counties from 71 (Meath) to 140 (Cork), reaching over 300 in some of the manufacturing counties of Ulster, and being highest in the county of Dublin (1263). The province of Ulster has 26 per cent of the area, and  $35\frac{1}{2}$  per cent of the population, Munster, 29 and  $24\frac{1}{2}$ ; Leinster, 23 and 26, and Connaught, 21 and  $14\frac{1}{2}$ . Of the total area of the United Kingdom, Ireland has 27 per cent, and of the pop 10.7, of the total revenue it contributes 6.5 per cent, but of the revenue applied to imperial purposes only 2.5. Ireland has thirty-two ancient counties, besides six county boroughs—two (Belfast and Dublin) between 350,000 and 300,000, and one (Cork) between 100,000 and 50,000. The surface geography is simple, there being a basin-shaped central plain (250 to 300 ft), with, round all the coasts, high ground reaching a height of from 2000 to over 3000 ft. As there is abundance of rain from the W and S W this configuration naturally results in a large area of bog-land. There are a number of lakes of some size—Neagh, Erne, Allen, Ree, Derg, Conn, Mask, Corrib, Killarney, &c.—and the drainage is carried off in the N by the Foyle, Bann, &c., E by the Laggan, Boyne, Liffey, &c., S by the Barrow, Suir, Blackwater, Lee, &c., and centre and W by the Erne, Moy, Galway, and Shannon, &c. The rim of mountains in the direct path of the warm damp W and S W winds off the Atlantic (wind in W for about three-fourths of the year) gives the western half of the country a large amount of moisture, and the whole a mild atmosphere. The rainfall, in the hill districts, ranges from 40 to 75 in., and in the centre and along some parts of the E coast from 25 to 30, while the summer isotherms range from  $58^{\circ}$  Fahr in the N to

62° 5' in the S, and in winter 39° surrounds an oval in the centre and N E, and the rest of the country ranges from that up to 43° on the S and S W coasts

*Productions and Resources.*—Ireland is essentially an agricultural and grazing country, the mineral output being valued at only about £240,000, and of this nearly one-third is for igneous rocks, and little over one-fifth for coal. Of the bread-winners of the population some 45 per cent are connected with agriculture, 30 with industries (19 manufactures), and fewer than 4 with commerce. The coal (100,000 tons) comes mainly from Kilkenny (Castlecumber), and Tipperary. The slate, marble, and stone, quarries might be more largely developed, and even as things are there is some export of limestone and iron ore (Antrim). Of the whole area, some 4,800,000 acres are barren mountain land, peat bog, marsh, water, &c., 300,000 are under wood; 10,500,000 are under permanent pasture; and 4,600,000 are under crop. Of the last nearly a quarter is under oats, over a quarter under sown grass, over one-seventh under potatoes, and about one-sixteenth under turnips, while over 50,000 acres are occupied by flax. The cattle number nearly 4,700,000, the sheep nearly 4,400,000, the pigs over 1,200,000, and the horses more than 560,000. Of a total of over 580,000 holdings nearly 50 per cent are under 15 acres, nearly one-fourth between 15 and 30, one-eighth between 30 and 50, and only about one-eighteenth over 100 acres. Ireland might and should do a larger trade in cattle and other live stock, and in export of dairy produce, and efforts are being made to extend co-operation in dairy-farming as in Denmark, so as to bring about an increase of trade in butter and other dairy products. The co-operative trade in butter has already reached a yearly value of £700,000, and with care and attention there is no reason why Irish butter should not be as famous, profitable, and important, as it used to be. With greater care and attention, much more could also be done with eggs and vegetables than hitherto, with the former more particularly. Horse-breeding is important all over the country, and in connection with the rearing of pigs there is a very valuable trade in bacon and ham, and pork, the chief centres being at Belfast, Limerick, Cork, and Waterford. Efforts are being made to extend the cultivation of flax, which has declined greatly within the last fifty years, and to introduce grass- and straw-plant as domestic industries. There are valuable fisheries almost all round the coast—mackerel, cod and ling, and herring—but a large proportion of the profitable exploitation on the E coast is carried off by Scottish and English boats that go across at the seasons, and on the W. there are difficulties, for commercial pur-

poses, as to access to markets. There are also salmon fisheries on coast and river. The manufactures are much handicapped by the want of coal, but in spite of this a great linen industry has been developed all over the N, with Belfast as the centre. There are 835,000 spindles employed, and nearly 31,500 looms, and in connection with it there is an extensive shirt-making industry in Londonderry. Belfast and Londonderry have also shipbuilding. At Dublin there is an important manufacture of poplin. Brewing of porter and ale, and distilling are also important, the chief centres being Dublin, Cork, Dundalk, Kilkenny, Limerick, and Belfast. Domestic and convent industries in lace and hand embroideries, spinning of wool and hand-loom weaving of woollens, carpets, rugs (Donegal and elsewhere), &c., are being carefully fostered, and encouraged by assistance in technical instruction and otherwise. There are small leather and boot and shoe industries in various parts. For shipping and commerce, *see* under Great Britain.

*Communications.*—There is an excellent and extensive canal system of nearly 600 m. From Dublin the Royal Canal passes W. and N to the upper Shannon, and thence by other canals there is communication northward and westward to the Erne, and by it to the sea, and by the Ulster Canal to Loch Bann, and thence to the sea at Coleraine, Belfast, and Newry. The Grand Canal passes westward to the middle Shannon, from which there is communication by lough and river to the northern line near Longford, and down the river to the sea. A branch of the Grand, striking off in County Kildare, gives communication with Waterford and the Suir, and there are a number of short branches elsewhere. The railway mileage is 3208, the chief lines being the Great Northern (Dublin to Belfast and Londonderry), and the Belfast and Northern Counties, both in the N, the Dublin, Wicklow, and Wexford, serving the E, the Midland Great Western, serving the centre from Dublin westward, the Great Southern and Western from Dublin to Cork, Valentia, Waterford, Tuam, and Athlone. The roads, in the better parts of the country, are excellent, but in the poorer and more out of the way districts the means of communication are still very poor and unsatisfactory. Efforts at improvement have been made of recent years by the making of new roads under the auspices of the Irish Congestion Board, and by the construction of light railways (229 m, included in total given above) with government aid. A scheme is also at present in progress of development for providing, by motor waggons and other self-propelled vehicles, a cheap and ready means of conveying rural produce to the chief ports and other outlets for convenient markets. One part of

the plan aims at bringing back, in this way, prosperity to many of the decayed fishing ports. There is over-sea connection from Londonderry, Belfast, Newry, Dundalk, Drogheda, Dublin, Wicklow, Wexford, Waterford, and Cork; and Atlantic liners by the N. passage call at Moville, and these going by the S at Queens-town, where the American mails and most of the cabin passengers are taken on board and landed.

**Irish Sea**, the inland sea between Great Britain and Ireland, opening to the Atlantic on the N by the North Channel, and on the S. by St George's Channel, 150 m at widest part; extreme depth, 500 ft. Area, about 7000 m

**Irkutsk**, a town and a government of eastern Siberia, Russia, mountainous, drained by Angora (Yenesai) and Lena, gold, iron, salt. The town, on the Angora, 3722 m W N W. of St. Petersburg, is a great centre of trade with China (tea), and for the distribution of European products to eastern Siberia. Letters, 12½ days. Area of province, 287,061 m. Pop 507,000, pop of town, 51,500.

**Irtish**, a great river of western Siberia, chief tributary of the Obi, which it joins from the N, navigable from April to November for some 1500 m of its course of 1700, basin, some 600,000 m., trade in metals and general goods.

**Irvine**, a small port of N Ayrshire, Scotland, on the Irvine, 30 m by rail S W of Glasgow, depth on bar, 6 to 16½ ft, dynamite works at Ardeer, chemical works. Imports ores and limestone; exports coal, pig-iron, chemical products, and fire-clay goods. Pop 9618.

**Isère**, a department of S E France, mountainous, rising to over 13,000 ft., drained by Rhone, Isère, and Drac, forests, iron ore, coal, tobacco, gloves (Grenoble), Chantreuse, &c. Area, 3201 m. Pop 569,000.

**Iserlohn**, a town of Westphalia, Prussia, 14 m S E of Dortmund, with zinc (calamine) mines, brass and bronze ware. Pop 27,500.

**Isle of Man**, an island in the Irish Sea, 30 m off the coast of Cumberland, and 16 off that of Wigtownshire, 33 m long, 11½ wide, and with an area of 145,325 acres, hilly in centre, rising to over 2000 ft, lead and silver-lead, and a small amount of zinc and copper, herring and mackerel fisheries. Regular communication from Liverpool, Glasgow, Silloth, Barrow, Belfast, and Dublin. Distance from Liverpool, 80 m, Barrow, 60. Pop 54,758.

**Istria**, a peninsula of Austria-Hungary, on the N E coast of the Adriatic, coal and alum, olive-oil, wine, galls, bark, and salt. See Fiume and Trieste.

**Italy**.—*Surface and Size*—Italy is a kingdom of Southern Europe, the central peninsula of that continent, extending south-eastward into the Mediterranean in the shape of a boot, lying

between 36° 40' and 46° 40' N., and between 6° 33' and 18½° E, and including the islands of Sicily and Sardinia. It is bounded N. by Switzerland and Austria-Hungary, N E by the Adriatic, S E. by the Ionian Sea, S W. by the Tyrrhenian and Ligurian Seas, and W by France. The greatest length of the continental part is about 720 m, the width 350 to a little over 80, and the total area 110,646, of which 91,416 is in the continental portion. The coast-line, exclusive of Sicily and Sardinia (2000), is nearly 2300 m, the frontier with France, 300; with Switzerland, 400, and with Austria-Hungary, 405. The surface features are simple in their main outlines. In the N is the great plain of Lombardy, with the basin of the Po bounded on the N and W. by the Alps which run out to sea at San Remo—highest point entirely in kingdom Gran Paradiso (13,650), and partly in kingdom Monte Rosa (15,216), both in N W. To the S. of the plain a ridge starting from the extreme S. of the Alps passes round the top of the Gulf of Genoa (where it shelters the Riviera), and rises into the Apennines, which stretch across and down the whole of the rest of the peninsula, and, after running out into the toe of the boot in Calabria, reappear in Sicily. On both sides of the Apennines are flat coastal strips varying in width (most extensive in Apulia in the S E), and extending inland along some of the principal streams. The drainage of Lombardy is carried off by the Po and Adige, their tributaries, and some smaller streams, along the W. coast by the Arno, Ombrone, Tiber, Garigliano, Volturno, and smaller streams; and along the E coast by a large number of small streams. The climate in the lower ground in the N has a temperature range of from 37° Fahr to 77°, and this gradually increases southward to 53° and 80°. The rainfall in the N is about 50 in., in the centre about 40, and in the S about 25. In the higher ground the temperature is, of course, lower, and the rainfall higher, and in all cases the conditions are rendered more favourable by the bright sunshine that is for a great part of the year everywhere prevalent. Along the coast-strips of the W. and centre E, and across from the latter to the Gulf of Taranto, the low ground is infested with malaria, which renders large tracts of otherwise fertile country utterly useless except for winter grazing, and even interferes with the working of the railways that pass through these districts. It is hoped that drainage operations, and precautions against insect bites may alleviate this evil, which affects some 16 per cent of the population.

*Government, &c*—The government is a constitutional monarchy, with a parliament consisting of a Senate and a Chamber of Deputies. The population numbers 32,450,000, of whom some 50 per cent of the bread-winners are

dependent on agriculture, about 25 on industries, and 3 on operations connected with commerce and transport. The holdings are generally small. The average Italian is but poorly educated, especially in the S, but the peasantry are frugal and industrious, and some of them seem specially fitted for particular occupations, such as working in caissons under increased air-pressure, &c. They live at home but sparingly and yet work hard, so that it has been said that it is possible to get more labour out of Italians and Chinamen, on less food, than out of workers of any other nation. In the better cultivated parts of the country there are good roads, but in other districts the means of communication are defective, and the ways bad. There are nearly 10,000 m of railway, mostly belonging to the state but leased for working to private companies. Of the total nearly 700 m are in Sicily, and over 600 in Sardinia. The Po and some of its tributaries are navigable, and so also are the lower portions of the Arno and Tiber, but outside the great northern plain the nature of the country is not suited for canal communication.

*Productions and Resources* — As may be gathered from what has been said of the population, Italy is mainly an agricultural country, but its industries have, of recent years, been rapidly developing. Of the whole area 70 per cent are productive, but in many cases the cultivation is primitive, and a much larger return could be obtained from the soil by improved methods. Of the productive area some 57 per cent are under acid fruits, 16 under wheat, over 12 under vines, nearly 7 under maize (the staple food-stuff), and nearly 4 under olives for oil, while other crops of importance are barley, chestnuts, rice, sugar-beet, tobacco, flax, and hemp. There are, besides, oats, rye, and the usual root crops. The cattle number some 5,000,000, the sheep 7,000,000, the goats and pigs 1,800,000 each, the horses 740,000, and the asses and mules over 1,300,000. The wool production is valued at over £600,000 (best from Apulia). The rice is grown in irrigated lands in the N., and efforts are being made to extend by government aid the already large irrigated area for this, and still more for pasture, as heavy grass crops can be got, and meadows can be mown four, five, six, or more, times every year. Under such rich feeding cattle produce large quantities of milk, and in the northern plain there is large output of Parmesan, Gorgonzola, and other cheeses. Poultry-rearing is important and so is the export of eggs. A considerable amount of wheat-flour is made into macaroni and vermicelli (best wheat from Apulia). The wine production has been falling off in recent years owing to the attacks of phylloxera, and to other countries having increased their production, but still more, probably, because the

wines, poorly made, will not stand a long journey, and are therefore useless for export. Re-planting with American stock, co-operation, and the employment of modern methods of treatment seem to be the remedies, but these are possible only in the larger vineyards where the proprietors have capital. In the smaller holdings the peasant proprietor, conservative by nature, sticks to the old ways, and, even were he inclined to act otherwise, he is handicapped by want of capital. The sugar-beet industry is making rapid progress and will, in many districts, probably lead ere long to great changes in cultivation, and the means of livelihood of the inhabitants. The rearing of silkworms is carried on all over the country, but is most important in the N., in Piedmont and Lombardy, where the industry gives employment to over 500,000 persons, besides the 175,000 (90 per cent women and children) employed in silk manufacture. There are over 10,000,000 acres under forest, the products from which—firewood, charcoal, timber, &c., but excluding chestnuts—are valued at some £3,500,000. The mineral products have an annual value of about £3,500,000, of which half is for sulphur (got mainly from Sicily, though it occurs in quantity elsewhere). Next in importance are zinc (about £600,000), lead, iron, lignite, copper, iron and copper pyrites, mercury, marble, and alabaster; while antimony, manganese iron ore, silver, gold, graphite, boracic acid, asphalt, petroleum, and salt are also worked. *See also* Sicily, Sardinia, and Elba. There is a coast and deep-sea fishing valued at £500,000 a year, of which the tunny catch is one-fourth, and the coral output about one-sixth. The industries have been hampered by the want of coal, of which the country has practically none, but with electricity as a motive power, and falls and rivers capable of furnishing 10,000,000 horse-power, a great change seems likely to take place. Of the 5,000,000 tons of coal at present imported the United Kingdom sends 90 per cent. The chief industries, besides those already mentioned, are silk winding, throwing, and weaving; cotton manufacture, woollen manufacture—all mainly in the N.—grain-grinding, mining, paper-making, dyeing of hides, making of olive-oil, pig-iron, machinery, glass and pottery, mosaics and cameos, tanning, glove-making, and straw-plait and straw hats. The straw-plait and several of the other industries are mainly domestic. Tobacco and salt are government monopolies.

*Trade, &c* — The imports are valued at nearly £69,000,000, and the exports at nearly £55,000,000, and there has been in the last 12 years an increase on the total trade of some 50 per cent. Of this about two-thirds is on imports and one-third on exports, but the increase on the former is to the extent of one-

third on raw materials for manufacture, one-fifth on other materials for manufacture, less than one-fifth on manufactured goods, and over one-fifth on articles of food and drink. Of the increase of exports over half is for materials for manufacture, and over one-third for manufactured articles. Some 17 per cent of the total trade are in articles for re-export, or in transit. Of the total import 12 per cent are for coal,  $8\frac{1}{2}$  raw cotton, and over 8 wheat, after which come machinery, raw or twisted silk, building timber, raw and dried hides, raw wool, fish of all sorts, horses, tobacco leaf, iron and steel, olive-oil, coffee, mineral oil, sugar, linen and hemp yarn, cheese, cotton yarn, cotton fabrics, railway materials, silk-worms' eggs, and indigo. The chief exports are silk (raw and thrown—over 25 per cent. of total), wine in casks, and eggs (each over £2,000,000), sulphur, hemp and flax (raw), olive-oil, and silk-waste (all between £2,000,000 and £1,000,000), manufactured coral, raw skins, meat (fresh and salted), marble, cattle, rice, zinc ore, straw-plait, grain, dyeing and tanning stuffs, swine, raw cotton, silk cocoons, and horses. Of the whole import the United Kingdom sends 16 per cent, the United States 13, Germany under 12, Austria-Hungary and France, each over 10, Russia over 8, and India, China, Roumania, Switzerland, the Argentine Republic, and Belgium, each between  $2\frac{1}{2}$  and 2. Of the exports Germany takes 16 per cent., Switzerland under 15—both export and import mainly transit—France 13, United Kingdom 11, United States over 10, Austria-Hungary over 9, and the Argentine Republic, Turkey, India, and Egypt, each between  $4\frac{1}{2}$  and 2. The greatest volume of trade used to be with the United Kingdom, but this country has, since 1898, been supplanted by Germany, and as a large proportion of the import value we send consists of coal (of which, in view of the development of electrical power, Italy will, probably, require less and less), it is a question whether the time is not opportune for considering what special exertion should be made to regain our lost pre-eminence. We have to compete not only with foreign rivals keenly eager and ambitious, and alert in commercial matters, but also with the vigorous industrial activity of Italy itself. Some of the more obvious methods seem to be in the use of trade lists in Italian, and with money, weights, sizes, &c., in values understood by Italians, prices quoted at Italian ports or places of importance in the country, pains taken to meet the wishes, requirements, and even prejudices, of the Italian customer, more extensive employment of commercial travellers, and the establishment of commercial agencies (such as the French already have) in all the important towns. The imports of British produce into Italy (total value some £8,000,000) are chiefly coal (50 per cent),

iron (wrought and unwrought), machinery (except steam-engines), sulphate of copper, wool, cottons, fish, steam-engines, and soda compounds—all between £600,000 and £100,000; and copper (wrought and unwrought), coal products, woollens and worsteds, manures, and miscellaneous chemicals, while there is a transit trade of nearly £700,000 in foreign and colonial merchandise, largely caoutchouc, fish (cured or salted), and raw hides. The exports of Italian produce sent to the United Kingdom (total value £3,500,000) are chiefly raw hides, lemons, hemp (dressed or undressed, and tow), chemical products (sulphur, borax, &c.), marble, sumach and other dye stuffs and tanning substances, and olive-oil—all between £400,000 and £150,000, and fruit (preserved with or without sugar—other than dried), works of art (not pictures), almonds, canned vegetables, essential or perfumed oil, farinaceous substances (not from rice), iron ore, zinc ore, wine, and oranges.

The chief articles sent to Italy from Germany are optical and surgical instruments, colours, machinery, railway tenders and vans, iron and steel bars, woollen tissues, dynamos, wool, iron and steel filings, iron and steel ware, alkaloids, calf hides ready for use, lithographs, and leather. From the United States, cotton (raw, nearly £4,500,000), petroleum and paraffin, wood, sulphate of copper, phosphates, copper, and bacon. From Austria-Hungary, wood and horses (each between £2,000,000 and £1,000,000), raw silk, railway tenders and vans, and wood-pulp. From India, cotton (over £1,250,000), raw jute, hides, sesamum, and tin. From the Argentine, raw hides, maize, dye-stuffs and tanning substances, and grease. From Roumania, maize, France, wool, Brazil, coffee, Chile, nitrate of soda, Sweden and Norway, codfish, Switzerland, cheese, Russia, petroleum, Greece and Tunis, olive-oil, China, silk-waste, Spain, tunny fish, Belgium, rails, and Canada, salt-fish. The mercantile marine of Italy has a tonnage of nearly 1,000,000; and the shipping, entered and cleared, at all Italian ports every year is about 40,000,000 tons in the foreign trade, and 20,000,000 in the coasting trade—over one-fourth of total at Genoa and Naples together. There are British consuls-general at Florence and Genoa; consuls at Brindisi, Cagliari (Sardinia), Milan, Naples, Palermo (Sicily), Rome, and Venice, and a number of vice-consuls. Mails from and to London thrice daily, letter postage,  $2\frac{1}{2}$ d per half-oz, postcards, 1d, parcels, *via* France, under 3 lbs, 1s 6d, between 3 and 7, 2s, between 7 and 11, 2s 6d, *via* Belgium, Germany, and Switzerland, 9d more in each case, money orders to and from; telegrams, 3d a word.

*Money, &c.*—The unit of account is the *lira* = 100 centesimi = a franc, a little over 25 lire =

£1 The weights and measures are as for France, with Italian forms of the various names where necessary. The naval ensign has three vertical bars—green, white, and red, the first next the staff; on the centre of the white is a shield with a blue border and a red centre bearing a white St George's cross, resting on the top of the shield is a crown. The mer-

chant flag wants the crown, but is otherwise the same.

**Ivanovo**, the "Manchester" of Russia, 210 m by rail N E of Moscow, with great cotton manufactures. Pop 54,000

**Ivory Coast**, a part of the N coast of the Gulf of Guinea, between Liberia and Gold Coast Colony; ivory trade now almost gone.

## J

**Jabalpur**, or **Jubbulpore**, a town of Central India, in a district of the same name, 228 m. by rail S.W. of Allahabad, important railway centre, with manufactures of carpets, cottons, &c. There is also a division of Jabalpur Area of division, 19,040 m, pop 2,380,000 Area of district, 3948 m, pop 750,000 Pop of town, 90,500

**Jacmel**, a port on S coast of Hayti, 30 m S of Port-au-Prince; good anchorage about half a mile off shore in 6 to 7 fathoms, at end of wharf, 10 ft. Imports linen and cotton goods (mostly from Britain), provisions (mostly from United States), and hardware, exports coffee, logwood, cotton seed, turtle shells, orange peel, goat skins, and hides. Regular communication from Southampton Distance from Kingston (Jamaica), 255 m, from Barbadoes, 812 Pop 7000

**Jaffa**, or **Joppa**, a seaport of Turkey, on the coast of Syria, 57 m by rail N W of Jerusalem, open roadstead with 8 to 10 fathoms, unsafe in winter Imports (total value some £400,000, mostly from Turkey and France), cottons, rice, iron, petroleum, lumber, cloth, and provisions, exports (total value some £280,000, mostly to Egypt and the United Kingdom), oranges, soap, sesame, water-melons, and lupens Of 600,000 tons entered and cleared, 24 per cent. are British, 22 Austrian-Hungarian, 20 French, and 17 Russian Regular communication from London Distance from Port Said, 140 m, from Beyrout, 125 Money orders exchanged British consular agent. Pop 30,000

**Jamaica**, the largest and most important of the British West Indian Islands, 144 m long by 50 m in greatest breadth, area, 4207 m The island is mountainous, being crossed from E to W by the Blue Mountains, rising to 7423 ft. above sea-level. Of the many rivers only one, the Black River, is navigable, and that merely for boats There are, however, very good harbours, of which the best is Port Royal, while the island is intersected by 1900 m of excellent main roads, 4300 m of good district roads, and 185 m of railway The climate varies, of course, with the altitude, but the great heat of the lowlands is tempered by the sea breezes, so that on the whole it is pleasant

and healthy, especially in the interior Of the two rainy seasons—May and October—the latter is the more severe, being accompanied usually by violent thunderstorms, and occasionally by terrible hurricanes Vegetation is luxuriant, and there is much valuable timber—mahogany, logwood, ebony, lignum vitae, &c Bananas, oranges, and other fruits are largely grown, and other important crops are sugar, coffee, ginger, pimento, cocoa, and cinchona The northern and western parts of the island are mainly pastoral—cattle and horses The coffee plantations are mostly along the Blue Mountains, the fruit district in N E The total trade of the island is mainly with the United Kingdom and the United States, Canada coming next Of total imports of some £1,800,000, over 45 per cent are from the United Kingdom, and over 8 from British colonies; while of total exports of about the same value, 18 per cent go to the United Kingdom, and 4½ to British colonies. Of a total of 1,800,000 tons, entered and cleared, nearly 54 per cent are British The imports consist mainly of provisions, clothing, hardware, liquors, and building materials, while the chief articles of export are the productions mentioned above, with rum and dye-woods The chief town is Kingston, on Port Royal harbour, in the S E, pop 47,000 The harbour is 10 m long by 2 to 4 wide, and with depth at wharves for largest vessels, and 9 fathoms farther out At Montego Bay, on the N W, there is an open roadstead with 7 to 10 fathoms, and Port Antonio, on the N E, is the outlet for fruit Letters, 1d. per half-oz, postcards, 1d., parcels, not over 3 lbs, 1s, between 3 and 7, 2s, between 7 and 11, 3s, telegrams, 3s a word, money orders exchanged, letters, 13 to 16 days, parcels, 17½, mails to and from London weekly Kingston is 692 m from Belize, 690 from Caracas, and 553 from Aspinwall Regular communication from London, Southampton, Liverpool, and Bristol—16 to 21 days Distance from London, 4210 m, Liverpool, 4135, Glasgow, 4245, Tyne, 4490, Cardiff, 4030 Pop 756,000, of whom only some 15,000 are whites and over two-thirds are negroes

**James River**, a river of Virginia, United

States, 450 m long, with an estuary of 60 m, navigable for large steamers (4000 tons) 160 m up to Richmond

Janina, or Yanina, chief town of the vilayet of the same name in Turkish Albania, 50 m inland from the coast opposite the island of Corfu, and 80 m W of Larissa, on a plain on W side of Lake Janina, gold lace, morocco leather, silk, and coloured linen Imports cottons (United Kingdom), woollens (United Kingdom, Austria-Hungary, Germany, and Turkey), hides (United Kingdom, Italy, Austria-Hungary, and France), flour (Turkey and France), and sugar, coffee, and beer (all Austria-Hungary), exports bitumen and skins (mostly to Austria-Hungary), and cheese (mostly to Italy) Money orders exchanged British consular agent. Area of vilayet, 7045 m Pop 648,000, pop of town, 20,000

**Japan—Surface and Size**—Japan is an empire of eastern Asia, consisting of a chain of islands, large and small, extending from the S end of the peninsula of Kamchatka down to within 100 m of the N end of the Philippines It lies between 22° and 51° N, and between 120° and 156° E, and is bounded N W by the Sea of Okhotsk, the Sea of Japan, and the Eastern Sea, and S E by the Pacific Ocean. In the N are the Kurile Islands, in the centre, S W of Saghalien, from which they are separated by La Perouse Strait, are the main islands of the empire—Yezo (or Yesso, or Hokkaido), Hondo (or Nippon, or Honshuu), Shikoku, and Kiushuu—S of which the Liu-Kiu, or Loo Choo, Islands carry the line on to Formosa and the Pescadores, which were ceded to Japan by China in 1895. The largest of the Kuriles are Paramushir in the N, and Urup and Iterup in the S, and the group has a small summer population engaged in hunting and fishing (bears, salmon, seals, &c) Formosa is separately noticed The total length of the chain is about 2700 m, the greatest width of the main islands about 200, and the total area, exclusive of Formosa and the Pescadores, 147,655 m, or inclusive of these 161,198 Yezo has an area of 36,299 m, and a population of 610,500, Hondo (730 m by 200 at the widest part), an area of 87,458 m, and a pop of 33,328,000, Shikoku, an area of 7031 m, and a pop of 3,014,000, and Kiushuu, an area of 16,840 m, and a pop of 6,811,500 The pop of the Pescadores is 50,000, and of the whole empire, 46,454,000 The surface is very mountainous, with a large number of active or dormant volcanoes, and the country is subject to frequent earthquake shocks, except along the N W side A number of the peaks are over 8000 ft, several between 10,000 and 12,000, and one, the beautifully-shaped cone of Fusan, 60 m S W of Tokio, reaches about 12,400 ft The outline of all the islands is much broken, and Yezo has a coast-line of over 1400

m, Hondo of over 4700 m, Shikoku of about 1100, and Kiushuu of over 2100; while, if smaller islands be included, the total coast-line of the empire is over 17,000 m. The rivers, short and rapid, and in summer torrential from the heavy rains and the melting of snow, are useful for irrigation, but not for navigation. The climate, naturally, over such a stretch of latitude, varies greatly; but taking the main islands the temperature ranges from about 5° Fahr (winter) to 80° (summer) in the N., and from 42° to 93° in the S., while the rainfall increases from 40 in in the N. to over 80 in the S, and in some places may rise as high as 150 Most of the rain falls in summer when the winds are from the S and E The hottest period is during July, August, and the first half of September. The branch of the North Pacific Current known as the Kuroshio or Black Stream, which passes northward along the whole S E. coast, makes this much warmer than the N W. There is snowfall all over the main islands—very heavy in the N W. Violent circular storms called typhoons occur both in summer and autumn, but are most destructive in the latter season

**Government, &c.**—The country is ruled by an Emperor (Kotei, or Mikado), with the advice of cabinet ministers appointed by, and responsible to, him The Emperor also exercises legislative power with the consent of the Imperial Diet, which consists of a House of Peers and a House of Representatives Communication is difficult owing to the steepness of the mountain passes, and the narrowness of the deeply-cut river valleys; while in the rainy season the rough tracks that exist become almost useless There is in consequence little traffic on wheels, and transport is on the backs of men or oxen, while these are also the “beasts of burden” employed for such cart or other conveyance as is carried on Progress is, however, being made in opening up the country, and there are some 5000 m of state roads, and over 15,000 m. of made district roads, while there are 900 m of government railways, and 3000 m of railway belonging to private companies Cross communication from E to W still, however, remains difficult

**Productions and Resources**—The country has, among the hills, a large amount of sterile ground, and cultivation of the productive part is greatly hampered by the difficulties of communication which render prohibitive the cost of transport for many agricultural products. Of the whole area (exclusive of Formosa) over 12,500,000 acres are under cultivation, and of this nearly 60 per cent are under rice, after which come rye, barley, and wheat. Owing, however, to the use of spade husbandry, and the plentiful application of manure, the produce is much greater than might be expected, and the soil maintains, in consequence, a much larger population. Millet, beans and peas,

buckwheat, colza, potatoes, cotton, hemp, tobacco, indigo, and tea are all grown, as well as mulberries for silkworms, which are placed in vacant spaces between other crops. Over 18,000,000 acres are under forest—bamboo, bananas, sago and other palms, the lacquer tree, camphor trees (Kiusiu, Shikoku, and E and S of Hondo), vegetable wax, paper trees, mulberry, &c., being mingled with cypress, oak, pine, beech, and almost all the ordinary trees of the temperate latitudes of Europe and America. The minerals are important, but need development. Coal production, especially from Kiusiu and Yezo, is increasing, and silver, copper (noted for its purity), antimony, gold, sulphur, iron, graphite, and china-clay are all worked, as well as petroleum (central Hondo and Yezo), but the iron output is hampered by the difficulty of getting the ore to coal. Fishing gives employment to 5 per cent. of the population, and fish and fish products have an annual value of over £2,500,000. Labour is abundant and cheap, and manufactures have, since they were fairly started, prospered with great rapidity. Among those of importance may be mentioned cotton yarn and piece-goods (the former, undertaken at first merely to supply the home market, now furnishes a valuable export to China, Corea, Hong-Kong, &c.), silk piece-goods and handkerchiefs, lacquer-ware, bronzes and other art metal work, mats, matting, carpets, and rugs, porcelain and pottery, straw-plait and bamboo and cane work, matches, glass, flannel, umbrellas, fans, iron and steel (especially fostered by government for naval purposes, &c.), wire nails. Formosa is not here taken into account.

*Trade, &c.*—The imports and exports are each valued at about £26,000,000, and of the total trade about two-thirds are carried on by foreign firms, and the remainder by Japanese merchants. Of the imports 23 per cent. are raw cotton (half from India), 13 sugar, 7½ metals (almost all iron, a small proportion of steel, lead, tin-plate, and zinc), and others of importance are machinery—including locomotives, boilers, and watches (£50,000)—rice, salted fish and general food-stuffs, cotton manufactures, woollen manufactures, oil-cake, dyes, wool, paper, petroleum, leather, drugs and chemicals, telegraph wire, fibres (flax, hemp, and jute), &c. Of the exports over 30 per cent. are silk (raw and waste), 11½ silk piece-goods, 9½ cotton yarn, and others of importance are coal, copper, tea, matches, rice, mats, cotton piece-goods, camphor, straw-plait, porcelain and earthenware, cuttle-fish, cigarettes, sea-weed, kanten (a sea-weed used as a substitute for edible birds-nests), timber, fish-oil, umbrellas, lacquered ware, &c. Over 40 per cent of the imports are from the British Empire (the United Kingdom having nearly 20 per cent., and India 16), 16 per cent. from

the United States, 11 from Germany, and 10 from China; and 28 per cent. of the exports go to the British Empire (Hong-Kong 17, and the United Kingdom 4½), 20 to the United States, 17 to China, and 10½ to France. Germany beats us in flannels, and is pressing hard in machinery, locomotives, and railway carriages; Belgium beats us, and Germany presses, in bar and rod iron, and both, the first especially, are pressing in other iron and steel lines; and Germany and Austria-Hungary are pressing in paper. The United States now competes in machinery, scientific and other instruments, metal manufactures, rails, railway and bridge materials, boots, clothing, and cottons; and while much of the success of German and United States manufacturers must be ascribed to their willingness to meet the requirements of Japanese customers, and to the energy of their agents, much is, undoubtedly, also due to the facilities given in both countries to through transport. The co-operation between railways and steamship companies enables both, the American in particular, to save largely on his carriage—in some cases as much as 50 per cent. The chief imports into Japan of British produce (total value say £8,500,000) are ships (over 40 per cent.), cottons, iron (wrought and unwrought), machinery and mill work, cotton yarn, woollens and worsteds, chemicals, telegraph wire and apparatus, coal, railway carriages, and painters' colours and materials, and there is a re-export of foreign and colonial merchandise valued at say £150,000. The exports from Japan to the United Kingdom (total value say £1,800,000) are chiefly silk manufactures (27 per cent.), unwrought copper (20 per cent.), straw-plait, curios, drugs, and rice (and rice meal and flour). The mercantile marine of Japan is over 860,000 tons, and the tonnage, entered and cleared, in the foreign trade over 11,000,000 tons, and in the coasting trade over 9,000,000. Of the foreign trade over 37 per cent. of the tonnage is British, over 35 Japanese (heavily subsidised), and over 11 German, after which with 3½ and 3 come Russia, the United States, and France. The bulk of the value of the trade is at Yokohama and Hiogo (Kobé), but in tonnage entered Moji and Nagasaki nearly equal them. There are British consuls at Kobé, Nagasaki, Shimono-seki, Tainan, Tamsui, and Yokohama, and several vice-consuls. Mails from and to London every week, letters, 2½d per half-oz, postcards, 1d, parcels, under 3 lbs, 1s 10d, between 3 and 7, 3s 6d, between 7 and 11, 5s 2d, money orders to and from; telegrams, 6s. 2d to 7s 9d a word, according to route.

*Money, &c.*—The unit of account is the gold yen (not coined) = 100 sen = 2s 0½d. The native weights and measures are *kin* = 160 mommé = 1325 lb avoirdupois, *kwan* = 1000 mommé = 827 lbs, *shaku* = 11 93 in = 10 sun = 100 bu.

=1000 rin, ken=6 shaku, jo=10 shaku, 360 shaku=1 cho, 36 cho=1 ri (the Japanese mile)=2 m 775 yards, a square cho=2 45 acres=10 tan, a square ri=5 95 m, sho=a little over 3 pints; to=10 sho; koku=10 to=39 7 gallons, or 4 96 bushels. The metric system applies in the ratio of 3 3 shaku=1 metre, and four-fifteenths mommé (0 2666)=1 gram. The rin is very nearly=a Chinese catty. The imperial standard is white with a red disc in the centre; and the merchant flag red with a circle (nearer the staff than the edge) from which white rays, broadening as they pass outward, extend in all directions to the margins.

Jaroslav, a town of central Russia, in a province of the same name, at the junction of the Kotorost and the Volga, 173 m by rail N E. of Moscow, with important manufactures of cotton, woollen, linen, and silk, goods. The province, lying along the Volga valley, has manufactures of cotton, linen, flour, spirits, tobacco, chemicals, machinery, gloves, boots, &c., and a trade along the Volga. Area of province, 13,751 m. Pop 1,072,500, pop of town, 71,000.

Jarrow, a town of Durham, England, on the river Tyne, 7 m by rail E of Newcastle, with a dry dock 350 ft. long, maximum depth on sill 21 ft., iron and steel industries, including shipbuilding, foundries, rolling mills, marine-engine shops, manufactures of chemicals and paper, and lead and copper works, export trade in coal. See South Shields. Pop 34,294.

Java, an island belonging to Holland in the East Indies, S E of Sumatra, with the Java Sea and Borneo to the N, the Indian Ocean on the S, the Bali Strait (3 m) on the E, and the Strait of Sunda (16 m) on the W. Lying between 6° 52' and 8° 50' S, and 105° 13' and 114° 39' E, it is long and narrow, the distance from E. to W being over 600 m, and the breadth 40 to 130, while the area is about 49,000 m. The S coast is inaccessible owing to the surf, and from it the surface rises steeply to a line of volcanic mountains that run from end to end of the island. There are over forty active volcanoes, some of the peaks reaching heights of 10,000 to 12,000 ft. Along the N are fertile alluvial plains. The rivers, short, and torrential in time of rain, are of no commercial importance. The climate, unhealthy in the low-lying districts, is hot and damp, but the heat is tempered by regular sea breezes. The average temperature in the lower parts is about 78° Fahr, extremes 66° and 92°, and the rainfall about 75 inches, the wet season lasting from November to March. There are over 1000 m of railway, and also a large extent of good trunk roads. Vegetation is luxuriant, the hills being covered with trees to heights of some 10,000 ft. The forests occupy probably one-fifth of the whole surface, and contain valuable teak (a government monopoly)

cocoa-nuts, palms, bamboos, spice-trees, &c. The cultivated products are rice, maize, sugar, coffee, indigo, tea, cinchona, and tobacco. The gold working is, meanwhile, at an end, but salt is produced, and coal has been found. The industries—manufacture of coarse native cloth and mats, soap, &c.—are only in their infancy. There is a large trade with Holland, Singapore, and Penang, the British Empire, and the United States. The imports (partly destined for the neighbouring islands, Java being a trading centre) are valued at some £15,000,000, the chief articles being cotton goods, cutlery, hardware, sulphate of ammonia and blood manures, ground-nut cake (Madras), bean cake (China), petroleum, and coal (mostly Japan and Australia). The exports, valued at some £18,000,000, go mainly to the Netherlands. The leading articles of export are sugar, coffee, tobacco, cinchona, quinine (United States and British Empire), tea, copra (France, Holland, Germany, and Russia), indigo (Japan, Russia, Germany), kapok (Holland, Australia, United States), buffalo hides, cow and goatskins, teak, and tin (from the islands of Banka and Billiton). Of the imports over £2,000,000 are from the United Kingdom, the chief articles being cottons (two-thirds of whole) and cotton yarn, steam-engines and machinery, manures, wrought and unwrought iron, coal, woollens and worsteds, biscuits, and wrought and unwrought copper. Of the exports only some £220,000 come to the United Kingdom (the amount is, however, very variable), the chief articles being unrefined sugar (quantity differing very much from year to year), spices, tea, drugs, and farinaceous substances. Of over 6,500,000 tons, entered and cleared, 23 per cent. are British, 44 Dutch, and 10½ German. The legal money, weights, and measures are those of the Netherlands, but in local use are the Amsterdam pound=1 09 lb avoirdupois; the picul=133½ lbs., the catty=1½ lb., and the tjengkal=4 yards. Postage letters, 2½d. per half-oz, postcards, 1d; parcels, not over 3 lbs, 3s, between 3 and 7, 3s 6d, between 7 and 11, 4s; money orders exchanged, telegrams, and Turkey, 3s. 10d a word, other routes, 4s, mails to and from London every week or oftener. For distances, see Batavia. Pop 28,746,000, of whom 28,305,000 are natives.

Java Sea, The, the part of the Pacific between Java and Borneo, and between Sumatra and Celebes, with a length of 960 m, a width of 260 m, an area of some 250,000 m, and an extreme depth of 550 fathoms—shallower than any other of the East Indian seas. It communicates with the Indian Ocean by the Straits of Sunda and Bali (see Java), and also by those of Lombok and Allas farther E.

Jedburgh, the county town of Roxburghshire, Scotland, 56 m by rail S E of Edinburgh; tweed cloth. Pop 3136.

**Jeddah**, or **Jiddah**, a seaport of Arabia, on the Red Sea, 65 m W. of Mecca, for pilgrims to which it is the chief port. extensive harbour with a depth of 3 to 17 fathoms, but obstructed by coral reefs, trade decaying. Imports general goods, exports mother-of-pearl, coffee, gum arabic, carpets, balsams, skins, and hides. British consul. Pop 18,000

**Jemappes**, a town of S W. Belgium, 3 m by rail S W. of Mons, on a valuable coalfield, with manufactures of chemicals, pottery, machinery, and glass. Pop 13,000

**Jerez**, or **Xerez**, a town of S E. Spain, 14 m N E of Cadix, centre of trade in sherry, to which it gave name. British vice-consul

**Jersey**, the largest of the Channel Isles, 14 m. from the coast of Normandy, and 95 from Weymouth, with a length of 11 m, a breadth of 5½ m, and an area of 28,717 acres; surface undulating, and mostly under cultivation, specially for the production of potatoes, which are the earliest in the English market, cattle famous for milking qualities and great production of butter, apples. On the S coast, on the E side of the bay of St Aubin, is St Helier, the principal town of the Channel Isles. The entrance to the harbour has a depth at low water of 9 ft., while inside, at the quays, there is a depth of 18 ft. Imports general goods; exports potatoes, cattle, fruit, butter, china stone, and gravel. For communication, see Guernsey. Pop of St Helier, 30,000; pop of island, 52,796

**Jersey City**, a town of New Jersey, United States, on the Hudson River, opposite New York, and practically a suburb of that city, the terminus of many railways, as well as of a canal to Easton, Pa. excellent harbour, large transit trade, especially in minerals and agricultural produce, manufactures iron, steel, machinery, engines, watches, oils and chemicals, tobacco, jewellery, pottery, &c. Pop 206,500

**Jerusalem**, the famous historic city in Syria, 56 m by rail E of Jaffa, has no commercial importance. Money orders exchanged. British consul. Pop 42,000

**Jibuti**. See French Somaliland

**Johannesburg**, the largest town of the Transvaal Colony, 1014 m by rail N E of Cape Town, 714 N N E of Port Elizabeth, 483 N N W of Durban, and 46 W S W of Pretoria, the centre of the Witwatersrand goldfields, one of the most expensive places of residence in the world, £2 a week being about the minimum rate for bachelor board and lodging, and clothing and imported stores are 25 to 50 per cent above market price in Europe. Mean temperature, summer 73° Fahr, winter 53°, but range of temperature during day sometimes 70°. Number of suburbs round. Pop of town about 50,000, of district, 102,000, of whom 51,000 are whites

**Johannisberg**, a village of Hesse-Nassau, Prussia, 13 m S W of Wiesbaden, with a small

but famous vineyard producing the celebrated *Johannisberger* hock.

**Johnstone**, a town of Renfrewshire, Scotland, 3½ m. W of Paisley, with flax, cotton, and paper, mills; iron foundries and machine factories. Pop 11,331

**Johore**, a native state, under British protection, in the S. of the Malay Peninsula; surface largely low-lying, but with detached hills (highest, 4186 ft.); good roads are being made, and railways have been begun; forests, iron and tin are found (the former plentifully), but are practically unworked; gambier, pepper, sago, timber, rattans, and damar exported through Singapore, which is 15 m N E of Johore, the capital, imports opium and general goods. Area, about 9000 m. Pop estimated at 200,000, of whom three-fourths are Chinese

**Jonköping**, a town of S Sweden, at the S end of Lake Wetter, 115 m by rail E of Gothenburg, with important manufactures of safety-matches, also of carpets, paper, linens, woollens, &c. Near it are important deposits of magnetic iron ore, blast-furnaces, and iron works. Pop 23,500

**Jujuy**, a province in N W of Argentina; mountainous, salt, gold, silver-lead, copper pyrites and other copper ores, and petroleum are all found, but are very little worked, wheat, cattle, and mules. The chief town, with the same name, is the terminus of the northern railway, on the route from Salta (44 m. S) to Bolivia, with which there is a considerable trade. Area of province, 18,977 m. Pop 54,500, pop of town, 6000

**Jumna**, a great right bank tributary of the Ganges, joining it 3 m below Allahabad, length, 860 m, basin, 118,000 m. After emerging from the Siwalik Hills, the river supplies water for the Eastern Jumna Canal, which irrigates the Upper Doab over a course of 160 m, and for the Western Jumna Canal, which irrigates part of the Punjab along a course of 433 m

**Jura**, a department of eastern France, sloping up by the foothills of the Jura Mountains to the mountains themselves, which here reach over 5000 ft, drained by the Rhone and its tributaries (the Saône, &c.), and by the Orbe, forests; salt, vines, making of Gruyère cheese, wood-turning, and watch and clock making. Area, 1928 m. Pop 261,500. It takes its name from the mountain range stretching from N E to S W along the borders of France and Switzerland, between the Rhine and the Rhone, for nearly 200 m, with a height of from 5000 to 5600 ft. The chain is crossed by railways from Geneva to Lyons and Mâcon, from Pontarlier to Lausanne and Neuchâtel, from Besançon to Chaux de Fonds, from Laestel to Olten, and from Brugg by Basel. The northern portion is well-wooded, and many of the inhabitants engage in watchmaking

**Jutland**. See Denmark

## K

**Kabul**, or **Cabul**, the capital of Afghanistan, in the N E, on a river of the same name, on the trade route between Central Asia and the Punjab, and with large and increasing transit trade, special trade in carpets and camel-hair cloth, exports to India include fruits and vegetables, ghee and other provisions, horses, drugs, spices, silk, wool, cattle, hides, tobacco, small local railway Pop 70,000

**Kadiak.** See Alaska

**Kaffa**, a seaport of Russia, on the E coast of the Crimea, with the sole oyster-fishery in Russia, and manufactures of caviare, camel-hair carpets, and sheep-skin rugs Pop 12,000

**Kagoshima**, a town in Kiushiu, Japan, 90 m S S E. of Nagasaki, porcelain and pottery in imitation of old Satsuma ware Pop 53,500

**Kaipara Harbour**, a large inlet on W coast of North Island of New Zealand, with export of kauri timber.

**Kaiserslautern**, a town of Bavaria, 52 m by rail S W of Worms, with manufactures of iron, cotton, woollen yarn, sewing and other machines, ultramarine, beer, &c Pop 48,500

**Kaiser Wilhelm Canal**, a ship canal from Holtzenau on the Baltic to Brunsbuttel harbour, at the mouth of the Elbe, on the North Sea Length of canal, 61 m, breadth at water level, 200 ft, at bottom, 72 ft, least depth, 29½ ft, double sets of locks at each end, 492 by 82 ft, can be used day and night Constructed in 1887-95 at a cost of £8,000,000, partly for the convenience of the German Imperial navy, it is also an important commercial route, as it saves 237 m of voyage (time a little over 11½ hours) between the Baltic and North Sea, and it is used by over 4½ million tons of shipping every year Of this Germany has (including coasters) over 60 per cent, Britain, over 9½, Denmark, over 8, and Sweden, over 6 The dues amount to about £100,000

**Kaiser Wilhelm's Land** See New Guinea

**Kalahari.** See Africa.

**Kalamazoo**, a town of Michigan, United States, on a river of the same name, 144 m. by rail E N E of Chicago, important railway centre, with manufactures of farm implements and machines, flour, paper, furniture, coaches, &c Pop 24,500

**Kaluga**, a town of Central Russia, in a province of the same name, 80 m. by rail N W of Tula, on the Oka, which is navigable, considerable transit trade in corn and cattle for Moscow, and manufactures of leather, tallow, candles, oil, furs, and a specialty—"Kaluga cakes"—sold all over Russia The province has iron and glass works, cotton, woollen, and

linen, mills, and tanneries Area, 11,942 m Pop 1,186,000; pop of town, 50,000

**Kama**, the chief tributary of the Volga, into which it flows 43 m below Kazan; navigable to Perm, 930 m, and the chief commercial route between Siberia and Nijni-Novgorod and St Petersburg; frozen for about one-third of the year, manufactured goods from Europe, and metals and metal goods, grain, timber, wooden goods, and animals and animal products sent in return Total, nearly 2,000,000 tons. Length, 1100 m.; area of basin, 190,000 m

**Kandahar**, or **Candahar**, the largest town in southern Afghanistan, 318 m by road S W of Kabul, and 150 by road and rail (85 of it rail) N W. of Quetta, on the main route between India and Persia, trades largely with Herat, Samarcand, Bokhara, and Bombay, silks and felts produced in large quantities for export Imports from India consist mainly of cotton goods, exports raw wool, fruit, vegetables, and provisions, &c. Pop estimated at 25,000 to 100,000.

**Kansas**, a central state of the United States, surface undulating prairie, rising from 800 ft. in S E to 4000 ft. in N W, drained by Kansas and Arkansas, and their tributaries, flowing to the Missouri; maize, wheat, oats, sorghum, beet, cattle-rearing, pigs, beef and pork packing, coal, lead, zinc, gypsum, salt Kansas City, pop 51,500, practically part of the town next noticed Area, 81,700 m. Pop 1,470,500

**Kansas City**, a town of Missouri, United States, on the right bank of the Missouri, 283 m by rail W by N of St Louis, important railway centre with grain elevators, stock yards, great meat-packing houses, dealing in horses and mules, and manufacture of butter substitutes; also manufactures of railway plant, flour, soap, beer, &c., deals in lead and zinc from Missouri, and lumber from Arkansas and Louisiana, even here British textiles of all kinds might be pushed, as well as china, linoleum, cutlery, salt, tea, and tin-plate, if makers would meet market requirements in lower and coarser grades, and send a personal canvasser British vice-consul Pop 164,000

**Kara**, the sea between Nova Zembla and the coast of Siberia, navigable for about two months, July to September, trade done with Yenesei and Obi Kara is also the name of a gold producing district and penal settlement in Transbaikalia, south-eastern Siberia, 5000 m E. of St Petersburg

**Karachi.** See Kurrachee

**Karharbari**, or **Kurhurbaree**, a coalfield of Bengal, India, 60 m N W of Ranganj

**Karikal**, a French possession on the Coro

mandel coast of India, 70 m. S of Pondicherry, with an area of about 53 m ; trade in rice British consul. Pop 18,000

**Karluk**, a town on Kadiak Island, Alaska, with the largest salmon cannery in the world, a port of call for steamers

**Karonga**, open roadstead on Lake Nyassa, at end of Stevenson Road, British Central Africa

**Karun River**, the only river of Persia navigable by sea-going vessels, joining the Tigris and Euphrates at Mohammerah, by the 4 m. cut of the Hafar Canal, open to foreign navigation as far as Ahwaz (70 m up from Mohammerah) to which there is a fortnightly steamer service under a subsidy from the British Government

**Kasanlik**, a town of eastern Roumelia, 87 m NW of Adrianople, and 5 m from the southern end of the Shipka Pass, with manufactures of attar of roses Pop 20,000.

**Kashan**, a town of Persia, 120 m S of Teheran, with important manufactures of silk-stuffs, brocades, glazed tiles, copper ware, and carpets Pop. 35,000.

**Kashgar**, the capital, and, next to Yarkand, the most important town, of eastern Turkestan, on the trade route between India, China, and Russia, crossing the Terek Pass; manufactures silk and cotton goods, carpets, saddlery, &c. Pop about 60,000.

**Kashmir**, a native state in the NW of India, mountains and rich valleys, the latter 5000 ft above sea-level, drained by Jhelum and its tributaries, grain and fruit, silkworms and manufactures of wool (especially the famous shawls), and metal work. Area, 80,900 m Pop 2,544,000 See Cashmere

**Kathiawar**, a peninsula on W. coast of India, between the Gulf of Cambay and the Gulf of Cutch; producing large quantities of cotton. Area, 20,559 m Pop 2,760,000

**Kazan**, a town in a province of the same name, in the W. of European Russia, a few miles above the junction of the Kama and the Volga, and 200 m E of Nijni-Novgorod, manufactures of leather, cotton and hemp goods, soap, candles, gunpowder, &c, and a centre of trade with the Siberian provinces, Bokhara, Persia, and Asia Minor Area of province, 24,601 m Pop 2,191,500; pop of town, 132,000

**Kazvin**, or Gasbin, a town of Persia, 86 m WNW of Teheran, where the trade routes between that city and Resht and Tabriz meet, fruit, grain, and wine, manufactures velvet, brocade, leather, and iron ware. Pop 35,000

**Kebao**, an island 17 m by 9, off the coast of Tonkin, with valuable beds of coal

**Keighley**, a town in the West Riding of Yorkshire, England, on the Aire, 17 m WNW of Leeds, connected with Hull and Liverpool by Leeds and Liverpool Canal; manufactures of worsted and woollen goods, worsted weaving and spinning machinery, sewing and washing machines, &c. Pop 41,565

**Keith**, a town of Banffshire, Scotland, 18 m. ESE of Elgin, lime and live-stock, manufactures of tweed cloth and blankets. Pop 4753.

**Kelung**. See Formosa

**Kendal**, a town of Westmorland, England, 22 m by rail N of Lancaster; with manufactures of heavy woollen fabrics, such as travelling rugs and horse-cloths, and of kerseymeres, leather, paper, snuff, &c. Pop 14,183

**Kenah**, or Kena, the chief town of Upper Egypt, on right bank of the Nile, rich district; sugar-cane and cotton, trade centre for Arabia and Central Africa Pop 27,500

**Kennet**, a right bank tributary of Thames at Reading, canalised to Newbury, whence the Kennet and Avon Canal passes to the Avon at Bath, and the canalised Avon leads to Bristol. There is thus communication between the North Sea and St. George's Channel Length of this part 87 m, taking barges of 3½ ft

**Kent**, an important county at the south-east extremity of England, between the estuary of the Thames and the English Channel, undulating in the interior—the Downs (782 ft), drained by Thames, Medway, Stour, and Darent; hop and fruit district and market gardens, Whitstable and Faversham oysters; the north-west corner practically a suburb of London, with the Woolwich arsenal and the Government dockyards of Sheerness and Chatham. Area, 995,344 acres Pop 1,351,849

**Kentucky**, a central state of the United States, in the Mississippi basin, mountainous in E, rising to about 3000 ft, but the W. is the river valley of the Ohio, while the SW has great cypress swamps, extensive coalfields both E and W, and iron, lead, and salt are also worked, large forests, rich soil, important for agriculture, producing in particular more tobacco and hemp than any other district in the United States, Louisville, on the Ohio, is the greatest tobacco town in the world, distilling Area, 40,000 m Pop 2,147,500

**Keokuk**, a city of SE Iowa, United States, on the Mississippi, great railway centre, and with important river trade also, the largest steamers being now able to reach the place through the canal of 11 m constructed to pass the Des Moines rapids, iron foundries, flour and saw mills Pop 15,000

**Kermanshah**, the capital of Persian Kurdistan, 280 m W. of Teheran, with manufactures of carpets, centre of trade routes to Paghdad, Teheran, Ispahan, and Tabriz. Pop 30,000

**Kertch**, a seaport of SE Russia, on the eastern shore of the peninsula of the same name on the strait of Yenikale connecting the Sea of Azov with the Black Sea. On the bar of Yenikale there is a mean depth of about 19 ft. From the end of November to the end of April the port is obstructed by ice, but there is now an ice-breaker. The chief imports are iron and steel wares and machinery, firebricks, and

general goods, very generally from the United Kingdom; and the exports wheat, barley, and linseed (mostly to France, Italy, Holland, and Norway), and pig-iron. The imports are worth some £100,000 and the exports £200,000. Of about 200,000 tons entered and cleared, about 48 per cent. are British. The district is rich in iron ore, cement-stone, asphalt, salt, naphtha, and there are oyster and other fisheries, but all these are, so far, but little developed. To improve the sale of British goods there ought to be a British commission agent or shopkeeper selling direct, without a middle-man's profit, and able to show samples and quote prices c.i.f. and duty paid, with such credit as may be desirable. Distance from London, 3510 m.; Liverpool, 3435; Glasgow, 3545. British vice-consul. Pop 29,000.

**Kettering**, a town of Northamptonshire, England, 75 m. by rail N.N.W. of London; manufactures boots and shoes, plush, stags, brushes, boot and shoe machinery, &c. Pop 28,653.

**Keweenaw Point**, a peninsula of the state of Michigan, United States, on Lake Superior, with valuable copper mines.

**Key West**, a small coral island, 7 m. by 2, off the coast of Florida, with a port of the same name; sponge fishing. Imports tobacco from Cuba; exports cigars, sponges, turtles, salt, pine-apples and other fruits, and vegetables. British vice-consul. Pop 17,200.

**Khaibar Pass**, the great pass from India to Afghanistan, through the Safed Koh and Sulaiman Mountains, 33 m long, 10 to 450 ft. wide, with rocky precipices rising on each side to heights of from 1400 to over 3300 ft. From Jamrud near Peshawar, where it begins, there is a rise of 1700 ft. to Landi Kotal, the summit level.

**Kharkoff**, or **Kharkov**, a town of S Russia, in a province of the same name, in the valley of the Don, 465 m. S by W. of Moscow, and 312 m. N.W. of Taganrog; famous for its great fairs (particularly horses and wool), and with manufactures of sugar, felt, soap, brandy, tobacco, &c. The province is a low plateau (600 to 700 ft.) with fertile soil; horses, cattle, sheep, silkworms, and beet. Area of province, 21,041 m. Pop. 2,510,000; pop of town, 175,000.

**Khartoum**, the chief town of the Eastern Sudan, near the junction of the Blue Nile and the White, 1625 m by river S. of Cairo, and 445 S.W. of Suakin, railway communication along the Nile to Cairo; starting point for caravans journeying into the interior; will, probably, again become an important trading centre, as it was before the rule of the Mahdi.

**Kherson**, a town of S Russia, in a province of the same name, 808 m by rail S of Moscow, on the Dnieper 19 m. from its mouth, with a trade in timber, a wool-cleansing industry, and manufactures of soap, tobacco, beer, and

tallow. The province is mainly steppe (400 to 760 ft.); salt, earthenware-clay, and lithographic stone, horses, cattle, sheep; wheat, rye, barley, tobacco; fishing and manufactures, &c. at Odessa, Kneron, Nikolaiw, and elsewhere. Area of province, 27,523 m. Pop 2,733,000; pop. of town, 69,500.

**Khiva**, a state of Central Asia, vassal to Russia, on the Amu, from which water is taken to irrigate the soil; cotton, grain, mulberries. Area of fertile part, 5210 m, pop 400,000, of whole, 22,320 m., pop 800,000.

**Kiangsu**, an E. coast province of China, lying on both sides of the mouth of the Yang-tee-kiang; flat, and intersected by Imperial and other canals, rich soil producing crops of every kind, salt, silks, nankeen, and lacquered goods. Area, 36,900 m. Pop. 20,905,500.

**Kiau-Chau**, a German protectorate on E. coast of Shantung, China: important, as coal-fields of Weihsen and Pashun, which are to be worked by German capitalists, are within less than 100 m, and to the former there is now railway communication from Kiau-Chau Bay. The Bay, which is being improved for shipping, has an area of some 200 m. The protectorate (area 200 m. and population 60,000) is surrounded by a neutral zone extending 30 m inland all round Bay, with an area of some 2500 m. and a population of 1,200,000.

**Kidderminster**, a town of Worcestershire, England, on the Stour, 121 m by rail N.W. of London, with important manufactures of carpets (no longer what is known as Kidderminster, but so-called Wiltons, Brussels, and Axminsters of superior quality). Pop 24,692.

**Kieff**, or **Kiev**, a town of S.W. Russia, in a province of the same name, on the right bank of the Dnieper, 390 m. by rail N. of Odessa, and 590 S.W. of Moscow, with manufactures of leather and candles, and five great fairs (largest in January); centre of commerce for S.W. Russia. The province is a plateau of 250 to 1050 ft.; forests; beet-root, and sugar production to value of £17,000,000, oil and oil-seeds. Demand has arisen for superphosphates and other artificial manures. British consul. Area of province, 19,691 m. Pop 3,576,500; pop of town, 247,500.

**Kiel**, a town of Schleswig-Holstein, Prussia, on a deep and spacious inlet of the Baltic (11 m. long), 66 m by rail N by E. of Hamburg, close to the Baltic entrance of the Kaiser Wilhelm Canal; inside harbour a depth of 23 to 25 ft., alongside quays about 20 ft. Imports coal, slates, and ship-building materials (all from United Kingdom), timber, maize, and gram, exports timber, grain, flour. Distance from London, 793 m; Leith, 694; Liverpool, 1144. British vice-consul. Pop 108,000.

**Kielce**, a small province of Russian Poland, undulating, 800 to 1350 ft., drained by Vistula and its tributaries; deposits of iron, coal,

lignite, zinc, tin, and sulphur, worked; distilling, sugar, cotton, paper, chief town with same name Area, 3897 m. Pop. 761,000; pop of town, 11,000

**Kilbowie.** See Clydebank

**Kilimane, or Quilimane,** a port of Portuguese E Africa, on the right bank of a river of the same name, 12 m from its mouth, bar with depth of 12 ft. Imports general goods, exports oil-seeds, rubber, ivory (including hippopotamus tusks and rhinoceros horns), copra, ground-nuts, wax, &c Regular communication from London Distance from Beira, 187 m; Mozambique, 325 Parcels, *via* Lisbon, under 3 lbs 3s 6d.; between 3 and 7, 4s, between 7 and 11, 4s 6d. British vice-consul Pop 3500

**Kilkenny,** an inland county, with a chief town of the same name, in the province of Leinster, Ireland, surface undulating, rising in N.E. to over 1000 ft; drained by the Barrow, its tributary the Nore, and the Suir; anthracite coal (Castletomer), and black marble, town, 81 m. by rail S.W. of Dublin, commercially unimportant Area of county, 509,249 acres Pop 79,159, pop of town, 10,609

**Kilmarnock,** a town of N. Ayrshire, Scotland, 24 m by rail S.W. of Glasgow, in a rich mineral district with ironworks, and has manufactures of engines, agricultural implements, hydraulic appliances and other machinery, carpets, bonnets, shawls, vinceys, tweeds, boots and shoes, calico-printing works, and a great annual cheese fair in October Pop 35,091

**Kilsyth,** a town in Stirlingshire, Scotland, 13 m N.E. of Glasgow, coal and iron mines, and cotton weaving Pop 7292

**Kimberley,** (1) capital of Griqualand West, Cape Colony, 647 m by rail N.E. of Cape Town, with famous diamond mines (Du Toit's Pan, Bulfontein, Kimberley, De Beers, and Wesselton, besides a number of river diggings along the Vaal), annual output of stones worth over £4,000,000 Pop 29,000, of whom half are of European descent (2) The northern division of Western Australia (47,000 m), with goldfields in its eastern districts The climate is tropical—hot and unhealthy, much of the soil fertile and well watered The goldfields are far from the coast, and the climate trying, nearest port to goldfields, Wyndham, Cambridge Gulf, 1960 m from Perth, the distance inland is 212 m, by fairly good road 250, communication to Wyndham by steamer from Fremantle some 1600 m

**King George's Sound.** See Albany

**King's Lynn** See Lynn.

**Kingston,** a town of Ontario, Canada, at the outlet of the St. Lawrence from Lake Ontario, and the entrance to the St. Lawrence and Rideau Canal giving connection with Ottawa (92 m), fine harbour with shipbuilding yards, engines, machinery, farm implements, leather, boots and shoes, &c Pop 18,000

**Kingston.** See Jamaica

**Kingston,** a town of the state of New York, United States, on the left bank of the Hudson, 51 m S. of Albany; railway and canal terminus, with a large trade in hydraulic cement and pavement; manufactures of beer, leather, iron goods, flour, &c Pop. 25,000.

**King-te-chin,** a city of China, in the province of Kiangsi, 85 m E.S.E. of Kiukiang, chief seat of the Kiangsi porcelain manufacture. Pop 600,000

**King William's Town,** a town in the S.E. of Cape Colony, on the Buffalo River, 29 m (41 by rail) W. by N. of East London, and 878 E by N. of Cape Town, chief seat of trade with Kaffirs on frontier, forest and pastoral district; sends wool, skins, &c, to East London, manufactures sugar, jam, soap, candles, leather, waggons, &c Pop 7500

**Kirkcaldy,** a port of Fife, Scotland, on the Firth of Forth, 15 m. (26 by rail *via* Forth Bridge) N. of Edinburgh, harbour dry at low water, average 16 ft. at high water, great linoleum and floor-cloth industries, besides potteries and manufactures of coarse and fine linens, spinning mills for linen and jute yarns, marine engine-shops, breweries, &c, there is a special export trade to the United States, and regular communication with London twice a week, imports flax, timber, cork and cork shavings, corn, guano, &c, exports manufactured goods, linoleum, coal, potatoes, and grain Pop 34,079

**Kirkcudbright,** a coast county of S.W. Scotland, with a rocky coast, surface hilly, rising in N.W. to over 2700 ft., drained by Dee, Fleet, Ken, and Urr, cattle and sheep, granite (Creetown, Dalbeattie, &c) Area, 575,565 acres Pop 39,383

**Kirkintilloch,** a town of Dumbartonshire, Scotland, 7 m by rail N.N.E. of Glasgow, and on Forth and Clyde Canal, coal in neighbourhood, manufactures of iron and chemicals, saw-mills, weaving Pop 11,681

**Kishineff, or Kishinev,** chief town of the province of Bessarabia S.E. Russia, on a tributary of the Dniester, 162 m by rail N.W. of Odessa, with manufactures of flour and tobacco, and also a considerable trade in grain, wool, hides, and tallow Pop 109,000

**Kissingen,** a popular health resort of Bavaria, on the Saale, 60 m E. of Frankfort-on-Main, with famous mineral springs the waters of which are exported bottled in great quantities (50,000 dozen) Pop 5000, rising in the season to 15,000

**Kistna, or Krishna,** a river of southern India, rising in the Western Ghats, and flowing for 800 m across the peninsula into the Bay of Bengal, navigable for only 50 m., and for but half the year, supplies some 300 m of irrigation canals, basin, 97,000 m

**Kiukiang,** a treaty port of China, on the

right bank of the Yang-tse-kiang, 480 m. N.N.E. of Canton. The province of Kiangsi, in which it is situated, is the great manufacturing centre and mart for Chinese high-class pottery. The imports and exports are each worth over £1,000,000 a year, and the carrying trade is mostly under the British and Chinese flags. No exports are shipped abroad direct, but a large amount passes out through Hong-Kong. The leading imports are opium, cotton yarn (Indian, Japanese, and native), grey and white shirtings, British sheetings, cotton lastings, tin, lead, ironware, steel, and other metal goods, sugar, edible seaweed, cuttlefish, kerosene (American, Russian, Sumatran), American ginseng, and matches (Japanese—but there is now a match factory in the place). The exports, with their destination, are black tea (United Kingdom), green tea (United States), brick tea (Russia), paper, tobacco, hemp or ramie (Japan), indigo (Shanghai or Tientsin), grass cloth, sesamum, beans and peas, china-ware, feathers (Germany), vegetable tallow (Tientsin), mats (Straits Settlements). Of some 3,400,000 tons entered and cleared, about 58 per cent. are British. British consul Pop 62,000.

**Kiungchow** See Hainan

**Kiushiu** See Japan

**Kladno**, a town of Bohemia, Austria-Hungary, 15 m. W.N.W. of Prague, in coal and iron district with iron manufactures Pop 19,000

**Klagenfurt**, the capital of Carinthia, Austria-Hungary, 262 m. by rail S.W. of Vienna, manufactures of iron, machinery, tobacco, white-lead, leather, &c. Pop. 24,500

**Klausthal**, a town of Hanover, Prussia, in the Hartz Mountains 2000 feet up, 25 m. N.E. of Gottingen, an important mining centre, silver-lead, copper, and zinc. Separated by a brook is Zellerfeld, a town of the same nature. Pop of Klausthal, 9000, of Zellerfeld, 4,500

**Klerksdorp**, a town of the Transvaal Colony, 7 m. N. of the Vaal River, and 164 m. by rail S.W. by W. of Pretoria, on a goldfield, diamonds have also been found, and coal. Pop. about 6000

**Klondyke**, a district in Yukon territory, N.W. Canada, in 64° N and 140° W, some 40 m. long and 40 m. wide, hills and low mountains reaching 3000 ft., on Klondyke River (properly Thondik), a tributary of Yukon. Gold discovered in 1896 on Bonanza and Eldorado creeks (just at mouth of Klondyke). The frost is intense, and the gravel beds under which the gold is found require to be thawed by the application of artificial heat. The first routes were by the Lynn Canal to Dyea and thence by the Chilkoot Pass, or by Skagway and the White Horse Pass, to the Yukon, thereafter down the river by boat, but now there is a railway of 100 m. by Skagway over the White Horse route to White Horse Rapids. The annual production is valued

at £4,000,000. Dawson City, the mining centre, has a pop. of 9500. The gold-bearing area, but not with the same richness, extends 500 m. south-eastward into British Columbia, and lies in places a width of 100 m.; but, all over, the severe climate, the shortness of the working season, and the difficulties of transport are great hindrances to the development of the fields.

**Knyana**, a town on S. coast of Cape Colony, at the mouth of a river of same name, 90 m. E. of Mossel Bay, least depth on bar 14 ft., trade in railway sleepers and timber, gold along river but in poor quantity, elephant preserve. Regular communication from London. Pop 1000.

**Kobé** See Niogo.

**Koblentz** See Coblenz

**Kolding**, a seaport of Denmark, on an inlet of the Little Belt, opposite the N. end of Fünen, with a harbour which can accommodate vessels of 20 ft draught, large ships anchor about 2 m. from the port in 3 to 5 fathoms. Imports: coal, lumber, grain, and general merchandise. Pop 12,000

**Kolin**, or **Kollin**, a town of Bohemia, on the Elbe, 38 m. by rail E. of Prague, chief seat of sugar industry; manufactures also chemicals, metal wares, oil, &c. Pop 11,000

**Köln** See Cologne

**Kolomea**, a town of Galicia, Austria-Hungary, on the Pruth a tributary of the Danube, 43 m. by rail N.W. of Czernowitz, with important manufactures of pottery, refines petroleum from surrounding district, and manufactures candles. Pop 34,500

**Komatipoort**, the pass in S. Africa where the Komati River crosses the Limpopo Range, traversed by the railway from Delagoa Bay to Pretoria, and just on the eastern boundary of the Transvaal Colony

**Kongsberg**, a town of Norway, on Laagen Fiord, 43 m. W.S.W. of Christiania, with important silver and iron mines. Pop 6000

**Konie**, or **Konia**, a town of Asia Minor, 143 m. S. by W. of Angora, with manufactures of carpets, woollen goods, hosiery, and gloves, present terminus of railway from Scutari by Afion Karahissar, which it is proposed to continue to the Persian Gulf. The vilayet of the same name has an area of 39,681 m. Pop 1,088,000, pop of town, 44,000

**Königsberg**, a town of N.E. Prussia, on the Pregel, 5 m. from its entrance to the Frische Haff, and 366 m. by rail N.E. of Berlin. Vessels drawing up to 13 ft. used to reach the port, but a channel has now been made from Königsberg to Pillau, at the entrance to the Frische Haff from the Baltic, which will enable vessels drawing 20 ft. to make their way to the town without lightening cargo. Königsberg is the commercial and industrial centre of eastern Germany, and one of

the great tea centres of the continent. Imports (total value over £10,000,000), colonial produce, iron, steel, tin-plates, coal, flour, wine, herrings, salt, exports (total value over £8,000,000), wheat, barley, rye, oats, linseed and rye-seed, timber, tares, hemp, flax, oilcake, luens, refined sugar, oil, bristles, bones, feathers, wax, and hides and skins. Manufactures of ironware, yarns, textiles, shoddy, chemicals, and leather, and working in amber. Regular communication from Hull, the Tyne, and Glasgow. The Frische Haß is a great lagoon, 57 m long and 5 wide, separated from the Baltic by a tongue of land 1 m across, and communicating with the sea by a channel half a mile wide; depth of lagoon about 12 ft. British vice-consul Pop 189,500

**Königshütte**, a town of Silesia, Prussia, 110 m. by rail S E of Breslau, important mining centre for coal, iron, copper, and zinc Pop 58,000

**Konkan**, the name given to the strip of country, 2 to 50 m wide, along the W. coast of India, between the Western Ghats and the sea.

**Kordofan**, a province of the Anglo-Egyptian Soudan, W of the White Nile; undulating plains, 1300 to 1900 ft, with isolated peaks rising to 2600; no rivers, but wadis with water in wet season when also there is abundant vegetation, millet, gum trees, prickly and thorny plants, cattle and camel rearing. Exports gum, hides, ivory, ostrich feathers, and gold, imports wheat, rice, sugar, salt, soap, and tobacco. Area estimated at 41,000 m. Pop. 200,000

**Korea**. See *Corea*

**Korsör**, a port of Denmark, on a bay of the Great Belt, sheltered harbour with at least 20 ft. of water. Imports coal, iron, machinery, tar, timber, flax, fodder, and general goods, exports grain, cattle, butter, cheese, beef, pork, wool, hides, and fish. British vice-consul Pop 5000

**Kostroma**, a town of central Russia, in a government of the same name, near the junction of the Kostroma with the Volga, 216 m by rail N N E of Moscow, cotton and linen spinning-mills, dye-works, corn-mills, and export of timber, manufactures wooden goods, pitch and tar, and leather. The province is an undulating plateau, with more than two-thirds of the surface covered with forests. Area, 32,490 m. Pop 1,429,500, pop of town, 41,500

**Kovno**, a town of S W Russia, in a district of the same name, on the Niemen, 523 m. by rail S W of St Petersburg, only 94 m by rail E N E of Königsberg, it has an active trade with Germany, importing salt and general goods, and exporting grain, flax, linseed, timber, and shoddy rags. The province, mostly a low plateau, does not call for particular notice. Area, 15,692 m. Pop 1,549,500, pop. of town, 74,000

**Kowloon**, or **Kaulun**. See *Hong-Kong*.

**Kozloff**, or **Kozlov**, a town of S central Russia, 123 m by rail S E. of Moscow; junction of railways from Sea of Azov and Caspian with the Moscow line. Pop 40,500

**Kra**, Isthmus of, the neck connecting the Malay Peninsula with the main continent, width at narrowest point 44 m. It has been proposed to make a ship canal across, shortening the distance between Calcutta and Hong-Kong by 540 m, and between Ceylon and Hong-Kong by 300. The summit level would be about 250 ft, and there is a distance of only about 8 m between the upper waters of the Pakehan and those of the Chumpon

**Krefeld**, a town of Prussia, 13 m N W of Dusseldorf, and 4 from the left bank of the Rhine, chief seat of German silk and velvet manufactures, and in Europe surpassed only by Lyons, has dyeing and printing of textiles, iron foundries, and manufactures of machinery, sewing-machines, chemicals, sugar, wax-cloth, spirits, soap, &c. Famous technical weaving school. Pop 107,000

**Kremenchug**, a town of Russia, on the Dnieper, 74 m by rail S W of Pultowa, with a trade in wood and wool, and manufactures of tobacco, farm implements, candles, leather, &c. Pop 59,000

**Krimmitschau**, a town of Saxony, Germany, 45 m. by rail S of Leipzig, manufactures of vicuña wool, woollen yarn and cloth, buckskin, ironware, and machinery. Pop 23,000

**Kuching**. See *Borneo*

**Kuen-Lun**, great mountain range, or ranges, of central Asia, extending from the Pamir by the N of Cashmere, and in a curve round the N of Thibet towards the border of China proper, about 1600 m in length, 100 to 150 m breadth, reaching an extreme height of 24,000 ft, and crossed by passes 15,500 to 19,500 ft above sea-level

**Kulu**, a valley in the Kangra district, Punjab, India, 40 m. N by E of Simla, with rich undeveloped deposits of silver, copper, and lead

**Kumaun**, a district on the S slope of Himalayas, in the N W Provinces of India, with valuable timber, tea plantations, and practically undeveloped deposits of iron, copper, lead, and asbestos

**Kur**, a river of Trans-Caucasia, Russia, flowing to the Caspian, navigable for 450 m out of its course of 820. Area of basin, 60,000 m

**Kurrachee**, or **Karachi**, the chief town and port of Sind, N W India, at the northern end of the delta of the Indus, 1169 m by rail S W. of Delhi, one of four great ports of India, least depth on bar, 20 ft, generally about 23 ft at low, and 33 ft at high water. The chief outlet for the products of the Punjab—wheat, oil-seed, cotton, &c.—and with considerable commerce with Afghanistan and Baluchistan. The annual trade is valued at over £8,000,000

Regular communication from London, Liverpool, Glasgow, Hull, and Cardiff Distance from London, 6110 m, Liverpool, 6035; Glasgow, 6145, Muscat, 470, Bussorah, 1250, Bombay, 500, Aden, 1470 Area of district of Kurrachee, 14,182 m Pop 565,000, pop of town, 117,000

Kursk, a province of central Russia, undulating plateau, 700 to 1000 ft., drained by tributaries of the Dnieper, Donetz, &c., phosphates, iron ore, and earthenware clay; exports wheat, rye, barley, fruit, and garden produce, manufactures of woollens, sugar, leather; flour mills The town, 330 m by rail S S W of Moscow, has a great fair, and is the seat of considerable trade in the products of its own and neighbouring provinces—leather, grain, flour, hemp, hemp-seed oil, skins, hides, tallow, felt, and bristles—which are sent to St. Petersburg Area of province, 17,937 m Pop 2,397,000; pop of town, 53,000

Kustendji, or Constanza, a seaport in the Dobruja, Roumania, the terminus of the railway to Tchernavoda on the Danube, harbour kept dredged to 22 to 23 ft, but bar cannot be crossed by vessels of more than 20 ft draught. Imports general goods, iron, agricultural implements, coal, and timber, exports barley, wheat, millet, rape-seed, &c., sends petroleum in tank steamers to United Kingdom and Norway, and in cases and barrels to Bulgaria, Turkey, and Italy Regular communication from Liverpool Distance, 170 m from Odessa, and about the same distance from Constantinople. British vice-consul Pop 16,500

Kutais, a province of Trans-Caucasia, Russia, E of the Black Sea, surface varying from lowland up to peaks of 10,000 ft., drained by Rion and its tributaries, and a number of smaller streams, forests, coal, naphtha, ores of manganese (important), copper, silver, zinc, wheat, maize, vines, silkworms. The chief town of same name does not call for special notice. Area, 13,968 m Pop 1,076,000, pop of town, 32,500

Kwang-si, a province of S China, N.E of Tonkin, mountainous, basin of Si-kiang, forests with timber trees and cinnamon, also indigo, sugar, and tea, but all meanwhile unimportant, gold, silver, copper, lead, tin, said to be found, also very large deposits of coal. Area, 80,100 m. Pop 5,151,500

Kwangtung, a S coast province of China, on both sides of Canton River, and with excellent communication by navigable rivers (Si-kiang, Pe-kiang, and Tung-kiang) and canals; surface very variable, and lower parts fertile and well cultivated, there being two and even three grain crops annually, rice, tobacco, sugarcane, indigo, tea, hemp, and mulberry (for silk); coral, and turtle shell; coal, copper, iron, mercury, silver, tin, lead, and salt. See also Canton, Hainan, Hong-Kong, and Swatow Area, 79,456 m. Pop 29,700,500

Kwanza, or Coanza, a river of Portuguese W Africa, entering the Atlantic 30 m S of St. Paul de Loanda, navigated by regular line of steamers over 120 m, as far as Dondo, a few miles below the Livingstone Falls Dondo is the trade centre, with coal near, and a good road eastward

Kweichau, an interior province of S W China, mountainous, basin of Yang-tse-kiang and Si-kiang, coal, iron, copper, wheat, maize, tea, opium, tobacco, and horses Kweiyang-fu, the chief town, is, from its position, commercially of some importance; near a coal district Area, 58,000 m. Pop 7,669,500

Kwitta, Quitta, or Kitta, a good anchorage and easy landing on British Gold Coast, Bight of Benin, calling place for steamers Imports general goods, and exports palm oil and kernels, rubber, and cotton Regular communication from Liverpool. Pop 5000

Kyoto, or Kioto, a town of Honshu, Japan, 329 m by rail S W of Tokyo, and 47 N E of Kobé, with artistic manufactures of pottery, porcelain, velvets, brocades, embroideries, enamels, and inlaid bronze. Pop 353,500

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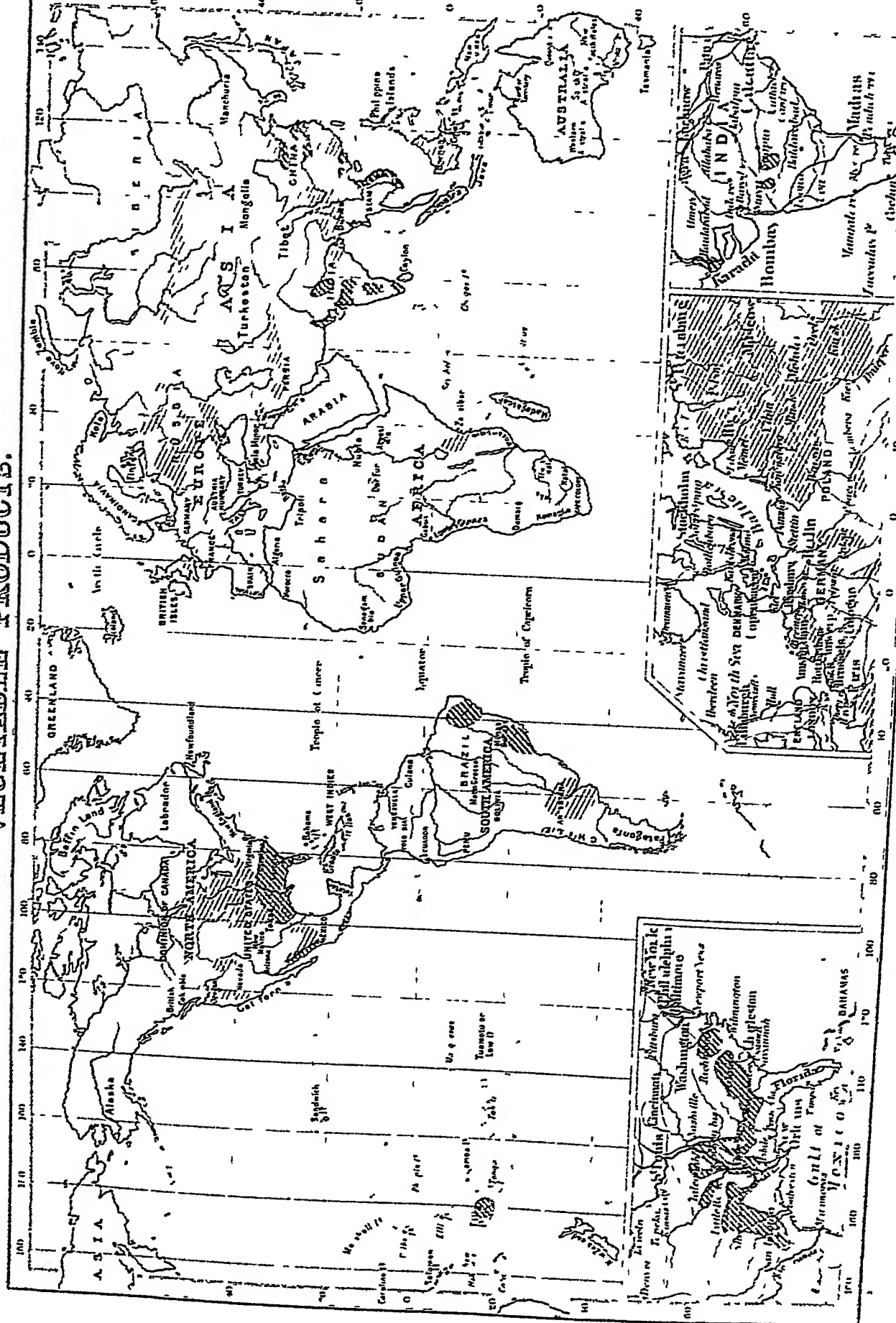
Laaland, an island of Denmark, 36 m long and 10 to 17 wide, flat, large forests of beech and oak, grain, hemp, hops, and apples Area, 445 m. Pop 66,000

Labrador, a great peninsula of British North America, between Hudson Bay and Strait and the Gulf of St. Lawrence, narrow strip of coast from Cape Chudleigh to the Strait of Belle Isle (about 120,000 m, all the Atlantic drainage area) is under the Government of Newfoundland, but the rest is divided between the territory of Ungava (draining to Hudson Bay), and the province of Quebec (draining to

St. Lawrence), of the Dominion of Canada (*see* Canada) The surface is mainly a plateau, 2000 ft. above sea-level, the distance from the Strait of Belle Isle to the W end of Hudson Strait is 11,000 m, and the area is about 420,000 m, many rivers Along the Atlantic coast, some 600 m, cod, salmon, and herring fishing, and sealing are carried on in summer, during which time there is also regular fortnightly communication along the coast from St John's

Labuan, a small island forming a British Crown Colony, about 6 m. from the N.W. coast

# THE GREAT PRODUCT.





of Borneo, and 725 from Singapore, managed by British North Borneo Company, coalfield with output of some 50,000 tons; chief town, Victoria, with excellent harbour, taking vessels of 27 ft at one quay, manufactures sago, and has, between Borneo and other islands and Singapore, transit trade in sago, beeswax, edible birds-nests, camphor, gutta-percha, india-rubber, rattans, tortoise-shell, and trepang; little direct trade with Great Britain. The imports are valued at about £1,500,000, and the exports at £1,000,000. Of some 320,000 tons, entered and cleared, 64 per cent are British. See Borneo Area, 30½ m. Pop about 8000 (some 30 Europeans); Victoria, 1500

**Laccadive Islands**, a group of 14 (9 inhabited) islands, 200 m W of the Malabar Coast, Madras, staple product coir or cocoa-nut fibre. Area, 21 m. Pop 15,000.

**Lachine Canal**. See Canada

**La Crosse**, an important railway centre of Wisconsin, United States, on the Mississippi, 195 m. by rail W N W of Milwaukee, lumber and grain trade; manufacture of farm implements, boilers, and engines. Pop 29,000

**Ladoga**, a lake (largest in Europe) of eastern Russia, immediately N of St. Petersburg, 129 m long, 78 wide, with an area of 6998 m, an average depth of 300 ft, and an extreme depth (N W) of 730 ft. It receives the surplus water of Lakes Onega, Ilmen, and Saima, is entered by some 60 rivers, and sends off the Neva to the Gulf of Finland. Though it is free from ice from May to October, the navigation is so much obstructed by storms, and by shallows, banks, and concealed reefs, that two large canals have been constructed along its southern and south-eastern coast, by which communication is facilitated between the Baltic and the Caspian (*via* the Volga). There is also communication with the White Sea.

**Ladrones**. See Marianne Islands

**Lagos**, a British Crown Colony, on the Bight of Benue, including the Island of Lagos and a large protectorate behind, lying 160 m along the coast between Dahomey and Southern Nigeria, and with Northern Nigeria to the N E. The island has an area of about 3½ m, the colony of 3420 m, and the protectorate of about 23,300 m more. Mean temperature about 82° Fahr, rainfall 74 in. Opposite the western extremity of the island is the port, Lagos, with the bar accessible to vessels up to 10½ ft; passengers landed by tenders and surf boats, and cargoes have to be taken 200 m S E to Forcados, the northern branch of the Niger, where they are transhipped into tenders. There is a railway from Iddo (between Lagos Island and the mainland) to Ibadan, near the centre of the territory (123 m), with a branch to Abeokuta (3 m). There is also communication from E to W along a network of lagoons parallel to the coast, with creeks opening into

the interior. Cotton planting and the cultivation of sugar are being tried. The trade is almost entirely with the United Kingdom and Germany, but some of the exports go to Brazil and France; chief imports cotton goods, spirits, tobacco, hardware, and general goods; exports palm oil and kernels, distribution of cotton goods, tobacco, and spirits; rubber, mahogany, country cloths, and shea butter. The imports and exports each total about £900,000, and of the former 81 per cent are from the United Kingdom, and 4 per cent from British colonies, and of the latter 34 per cent go to the United Kingdom, and 8 per cent to the colonies. Of over 1,000,000 tons entered and cleared 77 per cent are British. Postage letters, 1d per half-oz.; postcards, 1d, parcels, not over 3 lbs, 1s; between 3 and 7, 2s; between 7 and 11, 3s., telegrams, 6s 5d a word, money orders exchanged, mails to and from London every week or thereby; time for letters 19 days, parcels 29. Regular communication from London and Liverpool. Distance from Liverpool, 4279 m, Freetown, 1203, Cape Coast, 315, Brass, 232. Pop of the whole territory estimated at 1,500,000. Lagos town, 42,000 (largest on whole W. African coast)

**La Guaira**, or **La Guayra**, the port of Caracas, the capital of Venezuela, both railway to capital and harbour in hands of British companies, good anchorage, with 10 to 40 ft alongside quays. Imports coal, machinery, and general goods; exports coffee, cocoa, hides, of imports United States has about half, United Kingdom about one-fourth. Regular communication from London, Liverpool, and Southampton. British vice-consul. Pop 20,000

**Lairbach**, the capital of Carniola, Austria-Hungary, on a river of the same name, 92 m by rail N E of Trieste, important iron trade, bell foundries, and cotton, woollen, and tobacco manufactures. Pop 37,000

**Lanarkshire**, a large county of southern Scotland, with the greater part of the basin of the upper and middle Clyde, upper part, in Lowther Hills reaching over 2400 ft, sheep farms, in centre, river valley with rich orchards and market gardens producing all kinds of fruits, &c, especially strawberries and vegetables for the Glasgow market, north occupied by extensive and important coalfields (half of Scottish output), and the county has also great mineral wealth in iron, fireclay, limestone, and lead, extensive manufactures of iron and iron goods of all kinds, steel, machinery, textiles, fireclay goods, &c. The county town, Lanark (pop 6567), does not call for particular notice, the manufacturing and industrial centres being at Glasgow, Coatbridge, Airdrie, Hamilton, and their neighbourhood. Area, 562,821 acres. Pop 1,339,327

**Lancashire**, a coast county of N W Eng-

land, lying along the Irish Sea. The low, flat coast is much broken, so that there are many good harbours, through which, especially Liverpool, passes one-third of the whole foreign trade of the country; surface rugged and mountainous in N and E, reaching in the former an extreme height of 2633 ft; drained by Duddon, Lune, Ribbles, Mersey, Irwell, and other rivers. The iron ore of the north has given extensive development to iron and steel industries (*see* Barrow-in-Furness), and the large coalfields have become the seat of the greatest cotton industry of the world. Copper, slate, earthenware-clay, and fireclay are also found, and there are brine springs yielding large quantities of salt. Other manufactures are alkali, glass, soap, candles, machinery, paper, &c. Excellent communication in all directions. Area, 1,207,605 acres (sixth in England). Pop. 4,406,787 (largest in England outside London).

**Lancaster**, the county town of Lancashire, England, on the River Lune, 12 m from the sea, 45 m by rail N. by E of Liverpool, and 231 m N W of London, canal communication to Preston and Kendal by Lancaster Canal, 72 m long, and taking boats of 3 ft. 10 in (branches also to Leeds and Liverpool Canal); owing to silting up of Lune large vessels have to go to Glasson Dock (canal terminus), 5 m down the river, which has a depth of 13½ ft at neaps, and 21 ft. at springs. The trade is coasting, and with America, Spain, and the Baltic, cabinetmaking and upholstery, and manufactures of cotton, silk, oil-cloth, brize tablecovers, machinery, and railway waggons. Pop. 40,329.

**Lancaster**, a town of Pennsylvania, United States, 69 m by rail W of Philadelphia, with a considerable trade in tobacco, and manufactures of cotton, leather, and earthenware. Pop. 41,500.

**Landes**, a coast (sea boundary 75 m) department of S W France; considerable tracts of barren sand and marsh with sand dunes along coast, mostly drained by Adour and its tributaries, forests of pine, oak, and cork, manufacture of resin and its derivatives, charcoal, &c., pigs for hams, rock salt. Area, 3599 m. Pop. 291,500.

**Land's End**, a granite promontory with cliffs 60 ft high, in Cornwall, most westerly point of England.

**Landskrona**, a seaport of Sweden, on the Sound, 16 m N N E of Copenhagen, excellent harbour, greatest depth 35 ft, and 15 at quays, shipbuilding, tanning, sugar-refining, tobacco manufacture. Imports coal, coke, coffee, machinery, artificial manures, &c., exports clay goods, bacon, butter, eggs, machinery, wood, &c. Regular communication from Humber. Distance from London, 705 m, Leith, 606, Hull, 611. British vice-consul. Pop. 14,500.

**Langeland**, an island of Denmark, at the ex-

treme S. end of the Great Belt, 32 m. long, and from 2 to 8 wide, corn, flax, cattle, timber, fish. Area, 106 m. Pop. 20,000.

**La Pallice**, a port of the department of Charente-Inférieure, W. France, on the Bay of Biscay, 31 m. N W of La Rochelle; harbour, 30 to 36 ft at high water, and vessels of 20 ft. can pass out and in for six hours of each tide, least depth 18 ft, two dry docks, largest 590 ft, with from 20½ to 30½ ft. on sill. Trade similar to that of La Rochelle. Regular communication from London and Liverpool.

**La Paz**, the chief town of a department of the same name, in Bolivia, in the Andes, 12,000 ft. above sea-level, 42 m. S E of Lake Titicaca; the most important commercial city of the republic, copper, alpaca, wool, cinchona. Connected by rail with Oruro and Puno. Area of province, 171,130 m. Pop. 421,000; pop. of town, 57,000.

**La Plata**, the chief city of the province of Buenos Ayres, Argentine Republic, 40 m S E of Buenos Ayres; some cotton and woollen manufacture, canal from harbour here to Ensenada (5 m) on the river La Plata; largely a port of transshipment to and from Buenos Ayres. British vice consul. Pop. 61,000.

**La Plata**, Rio de, an immense estuary in South America, between Uruguay on the N. bank, and the Argentine Republic, formed by the junction of the rivers Paraná and Uruguay. Length, 170 m., breadth from 28 at Buenos Ayres to 140 at its mouth, shallow (5 to 10 fathoms) all over, with a precipitous northern shore and a flat coast on S. with many sand banks, receives the drainage of over 1½ million square miles.

**Larache**, a port on the W coast of Morocco, 45 m S S. W. of Tangier, harbour takes vessels up to 11 ft. only, and even then loading and discharging are by lighters, imports (total £200,000), mainly cottons (United Kingdom), sugar (France and Belgium), and candles (United Kingdom), exports (total £50,000), beans, bird-seed, wool, goat-skins, slippers, and eggs; of the former the United Kingdom sends over half, and of the latter it takes two-fifths. Of over 100,000 tons, entered and cleared, three-sevenths are British. British vice-consul. Pop. 20,000.

**Larne**, a seaport of Antrim, Ireland, 25 m N E of Belfast, with a harbour with 18 ft at low, and 26 at high, water of spring tides, shortest passage to coast of Great Britain (32 m), and daily mail steamers to Stranraer (2½ hours), bleaching, flour-milling. Pop. 6670.

**La Rochelle**, a seaport of the department of Charente-Inférieure, W. France, on an inlet of the Bay of Biscay, 297 m by rail S W of Paris, harbour ranging from 16½ to 22 ft. at high water of neap tides, ship-building, and manufactures of glass, sugar-refining, briquettes, cotton yarns, and brandy. Imports

coal (United Kingdom), timber (mostly from Russia, Sweden, and Norway, but some from Canada and United States), wines (Spain and Algiers), phosphates, nitrate of soda, jute and crushed bones for gelatine (both from India), kaolin (United Kingdom for Limoges—an example of the value of cheap water-carriage, china-clay could be got much nearer in France itself but the necessary land carriage would be very expensive), coal-tar and pitch (United Kingdom and Russia), and agricultural machinery (United States, United Kingdom, and Canada), exports wine and brandy, superphosphates, oysters, and fresh vegetables (last to United Kingdom). Of some 900,000 tons, entered and cleared, about 50 per cent. are British, and 23 French. The demand for British goods is practically nil, and indeed here, as elsewhere in France, the high duties render competition impossible where a French firm cares to put down machinery for the manufacture of any special article. As against German goods Britain is handicapped by the longer hours worked by the German artisan for a smaller wage, and also by the low grade of quality, comparison in this respect being impossible except in lamps, glass ware, and a very few other articles; but when we come to competition from the United States it is difficult to understand why the British manufacturer should be beaten in light agricultural implements, shop-tools, lathes, and similar articles, as the American manufacturer has to pay higher wages, and to send his goods longer distances. Regular communication from Liverpool. British vice-consul. Pop 31,500.

**Lasalle**, a town of Illinois, United States, at the head of the navigation on the Illinois River, 99 m. by rail W S W of Chicago, with which there is also communication by the Illinois and Michigan Canal (84 m.), bituminous coal, zinc smelting and rolling, and manufactures of glass and iron. Pop 10,500.

**Las Palmas**. See Canary Islands.

**Lattakia**, a port of Syria, on a rocky cape 75 m. N. of Tripoli. Imports cottons and cotton yarn and thread (all from United Kingdom), woollens, sugar, and alcohol, from Austria-Hungary, rice and coffee from India, Egypt, and America, and wheat, flour, &c., from Turkey—total value, about £75,000, exports Lattakia tobacco, cereals, and grain (to United Kingdom and Malta), eggs, albumen, dried figs, olive-oil, cotton, wax, scammony, and sponge—total value, about £90,000. Of 240,000 tons entered and cleared, 10 per cent. are British, 22 French, and 46 Austria-Hungarian. British vice-consul. Pop 14,000.

**Lauban**, a town of Silesia, Prussia, 18 m. by rail E S E of Gorlitz, manufactures of linen and cotton. Pop 14,000.

**Launceston**, the second city of Tasmania, on the N coast, 133 m. by rail N of Hobart,

on the Tamar 40 m. from its mouth at Port Dalrymple; no bar, and ships up to 1000 tons can reach the harbour at the top of the tide; 19 ft. at quay at high water. Imports coal and general goods, exports wheat, oats, fodder, wool, gold, silver, tin (from Ringarooma, 47 m. by rail), lead, copper, hardwood, bark, fruits. Regular communication from London. Distance from Melbourne, 240 m. Pop 18,100; or including suburbs, 21,200.

**Laurium**, a mining district in S E of Attica, Greece, 40 m. S E. of Athens, most important in country. The port, which serves the district, has imports of the value of some £140,000, of which 45 per cent. are British—chief article coal, large quantities of this are now also brought from Heraclea, in Asia Minor, and mixed with Durham coal, exports iron and manganese iron ore, silver lead pigs, zinc ore—total value of ores about £735,000—16½ per cent. to United Kingdom, 45 to Belgium, 2½ to France, and 7 to Germany. Of 375,000 tons entered and cleared, 40 per cent. are British. British vice-consul. Pop of district, 12,000.

**Laurvik**, or **Larvik**, a seaport of Norway, on a small fjord W. of Christiania Fjord, 98 m. by rail S S W. of Christiania, harbour takes vessels of any size, but depth at quay is only 18 to 21 ft., total trade over £300,000. Imports coal, grain, marine stores, &c.; exports timber deals, wood-pulp, granite, fish, and ice. British vice-consul. Pop 11,000.

**Laval**, the chief town of the department of Mayenne, France, on the River Mayenne, 46 m. by rail E of Rennes, manufactures linen, fancy ticking, sacking, &c. Pop 30,500.

**Lawrence**, a town of Massachusetts, United States, 26 m. by rail N. of Boston, on the Merrimac River. With important manufactures of cotton and woollen goods, cloth, paper, machinery, engines, boilers, clothing, hats, &c., one of the weaving mills is among the largest in the world. Pop 63,000.

**Laxey**, a village in the E. of the Isle of Man, with lead and zinc mines.

**Leadhills**, the highest village in Scotland (1400 ft.), in S Lanarkshire, 45 m. S S W of Edinburgh, and 40 S E of Glasgow, with lead mines. Pop 835.

**Leadville**, a town of Colorado, United States, 151 m. by rail S W of Denver, important mining centre, smelting and refining of silver and lead ore; gold in neighbourhood. Pop 12,500.

**Leamington**, a town of Warwickshire, England, on the Leam, 2 m. N E of Warwick, watering place, extensive manufacture of cooking ranges. Pop 26,888.

**Lecce**, the chief town of the province of the same name in S E Italy, 24 m. by rail S S E of Brindisi, important manufacture of tobacco, and also weaving of cottons, woollens, and linens, wine, olive-oil, and argols. Area of

province, 2623 m. Pop 706,915; pop of town, 32,500

Leeds, a town in the West Riding of Yorkshire, England, in the valley of the Aire, 25½ m by rail S W of York, and 186 N N W. of London; with water communication to the Humber by the Aire, and to the Mersey by the Leeds and Liverpool Canal, the great centre of woollen manufacture in England, and probably the greatest woollen cloth mart in the world, felts, druggets, and broad-cloth are specialties of its own manufacture, but it is the central market for cloth of every kind Ready-made clothing and iron are now also very important industries, and there are, besides, large manufactures of leather, boots and shoes, engines of all kinds and railway plant, weaving and spinning machinery, agricultural implements, tools, earthenware and fire-bricks, glass, paper, oil, chemicals, flax, silk, and tobacco The Leeds and Liverpool Canal passes by Keighley, Skipton, Burnley, Blackburn, and Wigan, to the Mersey, with branches to Bradford, Leigh, and the Ribble, length of trunk line, 128 m., of branches, 15 Pop 428,953

Leek, a town of Staffordshire, England, 24 m. N N E of Stafford, and connected by canal with the Trent and Mersey, centre of manufacture of silk thread and ribbons, and, owing to the suitable quality of the water, of silk-dyeing Pop 15,484.

Leeuwarden, a town in Friesland, N Holland, 113 m. by rail N N E of Utrecht, and on the Harlingen and Groningen Canal, trade in cattle, fruit, and agricultural produce, ship-building, iron, copper, and lead, works, and manufactures of linen, mirrors, and waggons. Pop 33,000

Leeward Islands, the name commonly given to the northern section of the Lesser Antilles, the latter name being applied to the whole of the smaller West Indian Islands between Porto Rico and Trinidad The chief British islands are Antigua, Barbuda, Redonda, Montserrat, St Kitts and Nevis, Anguilla, Dominica, part of the Virgin Islands, and Sombbrero Part of the Virgin Islands belong to Denmark; St Eustatius and Saba to Holland, Guadeloupe, Martinique, and St Bartholomew to France. St. Martin is divided between Holland and France. The British islands, except Sombbrero, form a federal colony with a total area of about 704 m., and a pop of 128,000 The chief islands are noticed separately The older definition made the term Windward Islands the same as the Lesser Antilles and applied the name Leeward to the islands along the coast of Venezuela, in this sense it had a clear meaning (which the modern use scarcely has), as the Leeward Islands thus named were less exposed to the prevailing N.E. trade winds

Leghorn, a seaport of N.W. Italy, on the

coast of Tuscany, 62 m. by rail W by S. of Florence; harbour 10 to 26 ft., with a dry dock 443 ft. long, and a depth on sill of 23½ ft. There is a very extensive coasting trade, and the foreign trade is carried on chiefly with Great Britain (largely Cardiff and Newcastle), France (Marseilles), and the United States The imports have a total value of some £3,500,000, the chief articles being wheat, coal (almost entirely from United Kingdom), tobacco, fish, raw hides (India, Cape of Good Hope, Aden, Tunis, and N. Africa), sulphate of copper and iron (largely from British Empire), pig and scrap iron (largely from United Kingdom), wool, woollen yarn and tissues (very largely from United Kingdom), raw cotton, cotton yarn, and tissues (all very largely from United Kingdom); coffee (almost entirely from United Kingdom), jute (entirely from British Empire), mineral oil, and carbonate of soda. Dried cod comes from both France and Newfoundland, but the former supply is driving the latter out of the market because it can, owing to bounties, be sold cheaper; comes regularly all the year round, instead of only between October and April, and is sent in small parcels of some 130 lbs., which suits the wants of small buyers The exports are valued at £2,000,000, the chief articles being hides (almost entirely to United Kingdom), hemp (a considerable amount to United Kingdom), olive-oil (largely to United Kingdom), worked marble and alabaster (largely to United Kingdom), candied fruit, worked coral (largely to United Kingdom), wine, mercury (largely to United Kingdom), rough marble and alabaster, boracic acid, soap, rags (largely to United Kingdom), straw-hats (made at Signa near Florence, almost none now to United Kingdom), wax, eggs, orris root, and juniper berries (Germany and United States) Of 3,700,000 tons entered and cleared, 23½ per cent. are British, 59 Italian, and 5 French. Regular communication from London, Liverpool, and Hull. Distance from London, 2170 m; Liverpool, 2095; Glasgow, 2205; Cardiff, 1990, Genoa, 78; Naples, 260 British vice-consul Pop 93,500

Leicester, a county of mid England, undulating surface, rising in N W to some 900 ft., drained by Soar and Wreake; coal, iron, limestone, fireclay, and pipeclay; sheep, cattle, Stilton cheese, hosiery, boots and shoes, agricultural implements, blast-furnaces, and basket-making The county town of the same name on the navigable Soar, 97 m. by rail N N W. of London, and with canal communication with the Thames, is the centre of the woollen hosiery industry, and has also manufactures of boots and shoes, cotton hosiery, lace, elastic web, and sewing cotton. Area of county, 527,124 acres. Pop 433,994, pop of town, 211,574

Leigh, a town of Lancashire, 16 m. W. of

Manchester, and with canal communication with Manchester, and with Leeds and Liverpool Canal, coal district, with manufactures of silk and cotton, agricultural implements, and glass Pop 40,000

Leipzig, a town of Saxony, Germany, 101 m by rail S S W of Berlin, great centre of book trade, with many type-founding and printing establishments Commanding the natural highway between the Rhine and Elbe basins, and with busy industrial districts around, it has a large distribution and transit trade, and the great fairs, lasting from three to four weeks, at Easter (the Jubilate fair—books) and Michaelmas, and for a fortnight at the New Year are still much frequented, though their importance is dwindling, and the sales now are largely retail Dealers in furs and Swiss watches carry stocks, but textiles and dress goods are mostly sold by patterns, and textiles are very often job lots There are also a wool market for two or three days in June, and an international-products fair in the beginning of July Round the city are many manufacturing districts which turn out pianofortes, scientific instruments, paper, chemicals, spirits, textiles, tobacco, iron, &c Distance from London, rail, &c, 751 m British consul-general Pop 456,500

Leith, an important seaport of Midlothian, Scotland, on the Firth of Forth, 2 m from Edinburgh with which it forms one continuous town There is an extensive harbour with five docks, and a sixth in course of construction, maximum depth of water varies from 15 to 26½ ft, new dock will have 31½, graving docks varying in length from 165 to 500 ft, mean high water depth on sill 10½ to 23 ft Regular communication with London, Aberdeen, New York, Hamburg, Antwerp, Amsterdam, Rotterdam, Christiansand, Copenhagen, Stettin, Bremen, and other continental ports Ship-building is carried on, and there are also mills (saw, flour, and meal), chemical works, sugar refineries, engine shops, distilleries, and breweries The imports have a total value of well over £12,000,000, principal articles butter and sugar (refined and unrefined), both over £1,000,000; between £1,000,000 and £500,000, wheat, eggs, barley, wheatmeal and flour, woollen yarn, and between £500,000 and £100,000, linen yarn, maize, wood, flax, cheese, caoutchouc, glass, iron manufactures of all kinds, paper and strawboard, oats, nitrate of soda and other manures, wine, hemp, cotton, flax, linseed and other seeds, and oil-seed cake, toys and games, rye, and farinaceous substances The exports are valued at over £5,000,000, chief articles coal and coal products, herring, cotton manufactures, machinery and millwork, iron and iron and steel manufactures, linen piece-good and yarn, and spirits; and there is a

transit export of foreign and colonial merchandise valued at about £160,000. Tonnage, entered and cleared, about 3,400,000, of which 82 per cent are British Distance from London, 473 m, Dover, 386, Glasgow, *via* Channel, 1063; Dundee, 48 Pop 77,439

Leitrim, a county of Connaught, Ireland; bleak, and centre and N wild and rugged reaching over 1900 ft, drained by Shannon; a little coal, linens and coarse woollens. Area, 376,510 acres. Pop 69,343

Leixoes, a port of Portugal, 3 m N of the mouth of the Douro, outport of Oporto, admits vessels of any size at all times Imports general goods, exports wine (mainly to Brazil), pit-props, &c Regular communication from Liverpool. British vice-consul See Oporto

Lemberg, the chief town of the Austria-Hungarian province of Galicia, 210 m. by rail E by S. of Cracow, is a centre of commerce with Russia and Turkey, manufactures machinery, earthenware, beer, oil, &c; has considerable trade as commanding the route from the Dniester valley to that of the Vistula Pop 160,000

Lena, the most easterly of the great rivers of Siberia, 2800 m long, with a basin of over 900,000 m., navigable for its whole length with the exception of its first 100 m among the mountains, steamers run to the gold district at Vitim, frozen from October to April, and delta often all the year round Undeveloped coal, iron, copper, silver, and salt, in basin

Leon, a town of Spain, capital of the province of same name, 256 m by rail N W of Madrid, centre of the Spanish linen industry. The province, drained by the Douro, is mountainous, and has a little iron, antimony, silver-lead, copper, and tin, merino sheep Area of province, 6167 m Pop 384,500, pop of town, 14,000.

Leopoldville, the chief settlement of the Congo Independent State, on the left bank of the Congo, 300 m from its mouth, at the lower end of Stanley Pool

Lepanto, Strait of, the entrance of the Gulf of Corinth, 1 m wide

Levant, all the part of the Mediterranean, and the surrounding districts, E of Italy

Leyden, or Leiden, a town of E Holland, on the Old Rhine, 5 m from the sea, 22 m by rail N of Rotterdam, and with canal communication to both Rotterdam and Amsterdam; once much more important, it has still manufactures of cloth (haze, camlet, &c) and cottons, as well as dye-works for cloth, and tanning Pop 54,500

Lhasa, or Lassa, the chief town of Tibet, on a fertile plain, 11,910 ft. above sea-level; sacred city of Buddhists, undeveloped gold and silver, skilful lapidaries and metal-workers; important transit trade by meeting

of caravans from India, Farther India, Chinese Empire, and Turkestan; chief articles tea, silks, carpets, gold lace, gums, porcelain, musk, rice, tobacco, and European and Indian manufactured goods. Pop about 25,000, with in addition probably double that number of traders and pilgrims.

Libau, an important seaport of Russia, on the Baltic, 146 m by rail W of Riga, fine harbour which is closed by ice for only a fortnight in the year; depth 27 ft. on outer bar, and 19 ft at quays. Iron foundries, oil from seeds, &c., total value of imports over £2,000,000, chief articles, machinery, coal, herring (mostly Scottish), cotton, copra, iron and steel, hides, chemical manures, cork, tallow, and dye-woods. Of these 56 per cent come from the United Kingdom, and 20 from Germany. The exports are valued at over £66,000,000, chief articles, grain, flax, hemp and tow, raw skins and hides, crushing seeds, linseed and other oil-cake, eggs, horses, timber, rye and wheat, game and poultry, bran, pulse, pipe staves, petroleum, tar and turpentine, wool, sleepers. Of these 37 per cent are sent to the United Kingdom, 19½ to Germany, and from 9 to 10 to Denmark, France, and Holland. Of about 1,600,000 tons entered and cleared, 12½ per cent are British, 32 Danish 20½ Russian, and 16 German, but over 25 per cent of the trade is with the United Kingdom, and 20 with Germany. Regular communication from London, Hull, the Tyne, and Manchester. Distance from London, 1022 m., Liverpool, 1383, Leith 933, Hull, 938, Tyne, 903. British vice-consul. Pop 64,500.

Liberia, a negro republic of W Africa, extending S E of Sierra Leone for about 500 m along the coast to the French colony of the Ivory Coast, and claiming the country for about 200 m inland. Area about 35,000 m of which only a strip of coast 6 m wide is under effective government administration, coast low and swampy, but the interior rises and has excellent timber, soil very fertile, commercial products coffee, palm oil and kernels, rubber, cocoa, sugar, ivory, arrowroot, piassava, hides, and kola-nuts. Chief town Monrovia, pop including Krootown, 5000. Trade mostly with Great Britain and Germany, chief imports from Great Britain cotton goods and iron, and exports to Great Britain palm-oil, caoutchouc and coffee, imports from United Kingdom valued at about £50,000, exports to, about £42,000, accounts are kept in dollars, but British money is current, and British weights and measures used. British consul at Dakar, and vice-consul at Monrovia. Postage letters, 2½d. per half-oz., postcards, 1d., parcels, not over 3 lbs, 2s, between 3 and 7, 3s, between 7 and 11, 4s, telegrams sent by post from Sierra Leone, money orders exchanged, mails to and from London every week or oftener. Pop. 2,100,000.

Liège, a town of E Belgium, in a province of the same name, on the Meuse, 62 m by rail S by E. of Brussels, in the midst of coalfields and iron works; makes enormous quantities of firearms, while machinery, files, nails, and all kinds of hardware, watches, jewellery, wool, glass, cotton, sugar, chemicals, leather, &c., are also manufactured. At Seraing, 4 m S W. are very large blast and puddling furnaces, machinery and locomotive works, and glass works. The province has deposits of coal, iron, zinc, and phosphate of lime. British vice-consul. Area of province, 1117 m. Pop 820,500; pop of town, 174,000, of Seraing, 40,000.

Liegnitz, a town of Silesia, Prussia, on the Katzbach, 38 m W of Breslau, manufactures boilers, iron, machinery, pianofortes, woollen cloths, hats, gloves, &c. Pop 55,000.

Lierre, a town of Belgium, 11 m. by rail S E of Antwerp; manufactures of silk, cotton, embroidery, lace, shoes, and beet-sugar. Pop 22,000.

Liguria, a division of N.W Italy, with oranges, and copper and iron pyrites and a little manganese. Area, 2037 m. Pop 1,081,000.

Liim Fiord, a shallow lagoon of Jutland, Denmark.

Lille, a town in the department of Nord, N. France, near the Belgian frontier, 66 m by rail S E of Calais, important centre of iron trade and of textile manufactures, especially cotton, flax, and hemp yarns, and also of linen and cotton cloths and thread, damask, ticking, tulle, &c., other industries, dyeing, tobacco, beet-sugar, spirits, beer, machinery, and paper. British consul. Pop 211,000.

Lima, the chief town of Peru, 9 m by rail from Callao its port on the Pacific, iron and copper works, and manufactures of gold lace, glass, silver ware, stamped leather, and furniture; railway communication also with Oroya (128 m), considerable centre of trade for W. coast of South America in the import of general goods, and the export of silver and copper ore, bark, vicunya wool, chinchilla skins, nitre, &c. British consul-general. Pop. 120,000.

Limerick, a port of Munster, S W. Ireland, in the county of the same name, on the left bank of the Shannon, 60 m from the Atlantic, and 120 m by rail S W of Dublin, dock has a depth at high-water of neaps of 17½ ft., and at springs of 22½, graving dock, 428 ft. long, with a maximum depth on sill of 17, lace and cured bacon. Imports wheat, maize, sugar, sawn timber, &c., to the value of over £850,000 a year, exports practically nil. Distance from Glasgow, 490 m. Area of county, which has dairy-farming and rears live stock, 662,973 acres. Pop 146,098, pop of town, 38,151.

Limoges, the chief town of the department of Haute-Vienne, S W central France, 248 m by

rail S. by W. of Paris, 218 N of Toulouse, on the Vienne; specialises in the manufacture of fine china, there being coal-mines and clunay-clay in the neighbourhood: also manufactures of flannel, druggets, cotton yarn, paper, &c. Pop. 84,500.

Limon, a seaport on the E. coast of Costa Rica, eastern terminus of trans-continental railway, with exports of coffee, caoutchouc, cocoa-nuts, sarsaparilla, furniture woods, dye-woods, and hats Regular communication from London and Southampton Pop 4000

Linares, a town of S. Spain, 90 m. by rail E.N.E. of Cordova; silver-lead and copper and iron mines, with smelting works and manufactures of gunpowder and dynamite British vice-consul Pop 35,500

Lincoln, the chief town of a county of the same name, in the centre of the E coast of England, between the Humber and the Wash The town, on the Witham, is 42 m S of Hull and 132 by rail N by W of London, important railway centre, and with canal and river communication with Nottingham, the Humber, Boston, and the Wash, trade in corn and wool, engineering works (agricultural implements, &c), and flour-mills, great horse fair for a week in end of April The county, largely low wold and fen, drains to the Trent, Witham, and Welland It has sheep, horses, and cattle, iron ore and iron smelting, and fishing (see Grimsby) Area of county (the second in England), 1,693,547 acres Pop. 498,781, pop of town, 48,784

Lingah, a seaport of Persia, near the entrance of the Persian Gulf, 100 m W.S.W. of Bender Abbas, anchorage in 5 fathoms half a mile off shore. Imports general goods and has a distribution trade in pearls, grain and pulse, and cotton piece goods, exports also carpets, import and export trade, valued together at nearly £1,000,000, is with India and the Arab coast, of 200,000 tons entered and cleared, 80 per cent are British Pop about 20,000

Linköping, a town of S.E. Sweden, 142 m by rail S.W. of Stockholm, communicating with the Baltic by canal, and exporting timber and gilt mouldings Pop 15,000

Linlithgow, a county of Scotland, on S side of Firth of Forth, with chief town of same name, surface undulating, rising to over 1000 ft., coal, iron, paraffin-oil shale, and fireclay The town has tanning, and fuse works Area of county, 76,861 acres Pop 65,708, pop of town, 4279

Linz, the capital of Upper Austria, on the right bank of the Danube, 117 m by rail W of Vienna, manufactures woollen and linen goods, carpets, fezes, machinery, leather, tobacco, &c. Pop 59,000

Lipari Islands, a volcanic group belonging to Italy, 15 to 30 m off the N coast of Sicily,

producing pumice stone, sulphur, nitre, sal-amoniac, Malmsey wine, soda, capers, figs, olives, and borax. Of the islands, 11 in number, Lipari, Stromboli, and Vulcano, are the most important. The highest point is 3170 ft, the area about 116 m. Pop about 20,000. Lipari, the chief town, on the island of the same name, has a pop of about 5000.

Lippe, or Lippe Detmold, a principality of N.W. Germany, in the basin of the Weser, rearing of cattle and pigs, and manufacture of merschaum pipes Area, 469 m Pop. 139,500

Lisbon, the capital of Portugal, on the N. side of the estuary of the Tagus, 9 m from the sea, and 412 by rail W.S.W. of Madrid. The bay-harbour is one of the finest in Europe, and allows the largest vessels to anchor close to the city; two graving docks, largest 590 ft, excellent position for trade with rest of Europe, W. and S. Africa and South America Chief industries are the manufacture of gold and silver ware and jewellery; others are the making of cotton, silk, hemp, chemicals, tobacco, stone ware, cutlery, hats, iron, &c Imports (total value about £7,000,000), cotton and woollen goods, linen, hardware, coal, iron, machinery, tin-plates, patent manures, tea, butter, ale, porter, &c, from Great Britain, coffee, cocoa, rubber, and wax, from Portuguese colonies; codfish from Newfoundland, iron, steel, timber, pitch, and salt fish, from Baltic ports; corn, hemp, flax, cloth, and petroleum, from Russia; linen and woollen cloth, hardware, machinery, sugar, &c, from Germany and Holland, silks, fancy goods, and perfumery, from France; sulphur and beans from the Mediterranean, and corn and petroleum from the United States Exports (total value about £5,000,000), wines, fruit, cork-wood, pit-props, oil, salt, leather, wool, cattle, tinned fish, and colonial produce Time for noon at Greenwich, 11 24 A.M. Regular communication from London, Liverpool, Southampton, Hull, and Bristol Distance from London, 1058 m; Liverpool, 973; Glasgow, 1093, Tyne, 1340, Cardiff, 880, Gibraltar, 302 British consul Pop 357,000

Lisburn, a town in Down and Antrim, N.E. Ireland, 8 m by rail S.W. of Belfast, with flax spinning and manufactures of damasks, muslins, diaper, and linen thread, and with bleach works. Pop 11,461

Lisieux, a town of the department of Calvados, N. France, 30 m by rail E. of Caen, important centre of manufacture of cretonnes and other textiles Pop 16,000

Lithgow, a town of New South Wales, 96 m by rail W. of Sydney, with coal, fireclay, and paraffin shale, iron smelting, and rolling mills Pop 5500

Liverpool, the greatest seaport on the W coast of England, receiving about one-quarter

of the total imports of the United Kingdom, and sending out more than half of the total export of British produce, and between one-fourth and one-fifth of the total British export of foreign and colonial merchandise. In value of imports it is surpassed among the ports of the United Kingdom only by London, while in total exports as well as in exports of British produce it surpasses all other ports, the whole amount in the latter case being one and three-quarter times the value of that of London. In export of foreign and colonial merchandise it is surpassed by London, which sends out more than twice as much. This pre-eminence is due to its being the great outlet for the manufactures of Lancashire, W Yorkshire, and Staffordshire, and to its receiving enormous quantities of raw cotton, bread-stuffs, and provisions from the United States, and of wool from Australia, besides the general return trade from both of those countries as well as from British North America, India, Africa, and the Mediterranean. The city, in Lancashire, is about 4 m up from the sea, on the NE side of the estuary of the Mersey, a shallow arm of the sea, some 16 m long, from  $\frac{3}{4}$  m (at Liverpool) to 3 m wide, and much obstructed by banks.

Liverpool, which is served by seven railway systems, is  $31\frac{1}{2}$  m by rail WSW of Manchester, 201 N W of London, 220 S of Edinburgh, and by sea 130 E of Dublin, and 660 from London. It is connected with Manchester also by the Manchester Ship Canal, and with the E coast by the Leeds and Liverpool Canal. The channel across the bar and up the Mersey has a depth of 26 ft at low water, and 55 at high water of spring tides, and there is a length of over 24 m of dock and basin quays at Liverpool, and over 9 m at Birkenhead, on the opposite side of the Mersey. There are in all 19 public graving docks, varying in length from 277 to 930 ft, and with 19 to 32 ft of water on the sill at high water of springs, and  $7\frac{1}{2}$  ft less at high water of neaps. The Herculeanum Dock has a great rock-cut petroleum reservoir (said to be the largest in the world) capable of holding 60,000 barrels. On the opposite side of the estuary, Birkenhead, in Cheshire, 15 m by rail NNW of Chester, is in reality a business and residential suburb. It has the cattle landing stages and ship-building yards. The leading industries of Liverpool are ship-building with the associated iron, brass, &c, industries, the making of machinery, chain cables and anchors, rice and flour mills, tobacco manufacture, sugar-refining, chemicals, and glass. Liverpool has, as we have already seen, over 27 per cent. of the total trade of the country, with imports exceeding the exports considerably in value. The imports have a total value of about £130,000,000, the chief being raw cotton (nearly 13,000,000 cwt), value over £33,000,000, over 80 per cent of

total imported into United Kingdom), between £5,000,000 and £10,000,000, bacon, wheat, fresh beef, caoutchouc, between £1,000,000 and £5,000,000, live stock, wool of all kinds, maize, hams, sugar and molasses, wheat meal and flour, leather, unwrought copper, palm and other oils, wood (hewn and sawn), regulus and precipitate of copper, tobacco manufactured, tobacco unmanufactured; between £500,000 and £1,000,000, butter, currants, oranges, hemp, raw hides, machinery, fresh pork, meat preserved otherwise than by salting, copper ore, nuts for oil, oil-seed cake, petroleum, furs, tallow and stearine, wine, furniture woods, house frames and joiners' work, &c, between £100,000 and £500,000, raw apples, fruit preserved with or without sugar, iron manufactures, tin ore, flax or linseed seed, chemical manufactures and products, cocoa, barley, raisins, raw bananas, leather manufactures, pig and sheet lead, iron and copper pyrites, silver ore, undressed goat skins, oats, cotton manufactures, dye extracts, cutch and gambier, indigo, myrobalans, valonea, and other dye stuffs; eggs, raw grapes, almonds and other fruit nuts, nitrate of soda and other manures, unwrought steel, tin in ingots, bars, &c, paper and strawboard, paraffin, cotton and other oil seeds, undressed sheep skins, brandy, onions, borax, cork, beans, peas, opium and other drugs, electrical goods, lemons, limes, and citrons, glass ware, hardware, hay, hops, salted beef, salted pork, crude zinc, condensed milk, musical instruments, painters' colours, paper-making materials, poultry and game, rosin, soap and soap powder, rum, tomatoes, potatoes, staves, and woollen manufactures of all kinds. The exports of British and Irish produce are valued at some £90,000,000, the chief articles being cotton piece-goods (about £38,000,000), between £5,000,000 and £10,000,000, iron and iron and steel manufactures, and machinery, between £1,000,000 and £5,000,000, woollen and worsted piece-goods, cotton manufactures other than piece goods, cotton yarn, chemicals, linen piece-goods, rail way carriages, and earthen and china ware, between £500,000 and £1,000,000, copper (wrought and unwrought), apparel, hardware and cutlery, linen manufactures other than piece goods, soap, implements and tools, manure, glass, skins and furs, and woollen and worsted manufactures other than piece-goods, between £100,000 and £500,000, silk manufactures, beer and ale, jute piece-goods, jute yarn, leather (wrought and unwrought), painters' colours and other materials, salt, wool, fish, linen yarn, silk yarn, and woollen and worsted yarn. The export of foreign and colonial merchandise is valued at over £15,000,000, the principal articles being, between £1,000,000 and £3,000,000, caoutchouc, raw cotton, jute manufactures and jute, between £500,000 and

£1,000,000, farinaceous substances, palm-oil, and sheep or lamb's wool, between £100,000 and £500,000, lace of all kinds, ornamental feathers, cured fish, hemp (dressed and undressed), undressed goat skins, woollen stuffs and carpets, cotton piece-goods not muslin, raw fruit, dressed leather, bacon, condensed milk, oil-nuts, silk manufactures, furs, unmanufactured tobacco, and mahogany. The tonnage entered and cleared is about 18,500,000, of which some 90 per cent are British. Registered at the port are some 1000 sailing vessels of over 600,000 tons, and more than 1050 steamers with a tonnage of over 1,700,000. Pop. 684,947, of Birkenhead, 110,926.

**Liversedge**, a town of the W. Riding of Yorkshire, England, 6 m by rail S E of Halifax, with weaving, and the manufacture of machinery and iron. Pop. 13,978.

**Livonia**, a Baltic province of Russia, E of the Gulf of Riga, flat, rising in N. to 450 ft, in S to over 1000, drained by Düna, Embach, and smaller streams, great forests, rye, barley, oats, and flax; distilling, oil-pressing, wool, silk, paper, machinery, saw-mills. Area, 18,158 m. Pop. 1,301,000.

**Lizard Head**, or **The Lizard**, the most southerly point of England, on S coast of Cornwall, rising to about 120 ft above sea-level, with a lighthouse visible 21 m.

**Llanberis**, a village of Carnarvonshire, N Wales, 9 m E.S.E. of Carnarvon, important slate quarries near.

**Llanelli**, a seaport of Carmarthenshire, 10 m W.N.W. of Swansea, lowest depth on bar 6 to 8 ft, docks take vessels from 17 to 24½ ft, leading industry copper working, also silver, lead, iron, and tin, works, chemical works and potteries. Imports timber, unwrought copper, and copper and iron pyrites; exports coal and copper. Pop. 25,617.

**Loanda**, or **St Paul de Loanda**, the chief town of Portuguese W Africa (Angola), a short distance N of the mouth of the Kwanza, and some 210 m S of the mouth of the Congo, good anchorage about 1½ m off shore in 7 to 14 fathoms, imports general goods, exports palm oil and kernels, wax, coffee, ivory, rubber, gums, and fibre, short railway inland. Telegrams, 8s 6d a word. British consul. Pop. 16,000.

**Loango**, the port of French Congo, which see.

**Lobos Islands**, two small groups of islands 12 m off the northern part of the coast of Peru, with large deposits of guano.

**Lodz**, a town of Russian Poland, "the Manchester of Poland," 76 m by rail S.W. of Warsaw, on a coal-field, the most important centre of Polish textile manufactures—cotton, woollen, flax, and hemp, also dyeing and machinery, second largest manufacturing centre in Russia, over 400 factories. Germany meanwhile holds the machinery supply—send-

ing articles cheaper, duty free, carriage paid, and with credit for two or even three years. Pop. 315,500.

**Lofoden**, or **Lofoten Isles**, a chain of islands belonging to Norway, stretching along the N.W. coast some 150 m, between 67° and 69½° N, mountainous, reaching a height of 3100 ft, sheep, great cod-fishing, January to March, and export of cod, codliver oil, and roe, herring also. British vice-consul. Area, 2246 m. Pop. probably about 4000, increasing in fishing season to five times as many.

**Loire**, an important river of W France, longest in country, 620 m, with basin of 46,000, the mouth, at one time 19 ft deep at low water, has been silted up so that it is now only some 6 ft; vessels up to 19 ft reach Nantes (35 m), partly by the aid of a ship canal 9½ m long, canal communication with Saône and Seine.

**Loire**, and **Haute-Loire**, two departments of S.E. central France W of the middle Rhone. The first is generally mountainous (rising to 5380 ft), but with central plateau, drained by Loire and Rhone, extensive deposits of coal, iron and steel (rails, armour-plates, machinery, and other heavy goods), lead, silk (especially ribbons at St Etienne), cottons, woollens, linen, paper, glass, leather, &c. Haute-Loire is high plateau rising to over 5750 ft, drained by upper Loire and Allier, coal. Area of Loire, 1838 m, pop. 648,000. Area of Haute-Loire, 1916 m, pop. 314,000.

**Loire-Inférieure**, a coast department of central W. France, along both sides of the River Loire for 78 m, surface generally low and flat, rising to 375 ft, flax, wine, and cider, fishing, coal, iron, copper, machinery, ship-building, salt, sugar, tinned fruits. Area, 2654 m. Pop. 665,000.

**Loiret**, a department of central France, with surface rising from 225 ft in N.E. to 900 in S.E., S drained by Loire, N by tributaries of Seine, forests, sugar-beet, and N producing heavy crops of wheat and oats, &c, so as to be called the "granary of France." Area, 2614 m. Pop. 367,000.

**Lombok**, one of the Sunda Islands, Dutch East Indies, between Timor and Java, mountainous but fertile, cotton, indigo, tobacco, maize, sugar, and coffee. Area, 2098 m. Pop. 410,000.

**London**, the largest city and greatest seaport in the world, the capital of England and of the British Empire, stands on both banks of the Thames, 60 m up from its mouth. Occupying parts of Middlesex, Surrey, and Kent, it forms an administrative County of London, with a population of 4,536,541 (of whom 26,923 are within the ancient city of London), while the outer ring of suburban districts, extending over parts not only of the counties already named, but also of Essex and Hertfordshire, add an additional population, within what is

known as the Metropolitan Police Area (12 m from Charing Cross), of 2,044,831. This makes a total for "Greater London" of 6,581,372, and beyond this a new ring of suburban districts has again begun to form. The total area of the county is 74,839 acres, of the city, 672 acres, and of Greater London, 443,419 acres. The districts N of the Thames, next the river, from W to E, are Hammersmith, Fulham, Chelsea, Westminster, Strand, City, and Tower Hamlets, outside these Kensington, Paddington, Marylebone, Hampstead, St. Pancras, Finsbury, Islington, Hackney, and West Ham, and between Finsbury and the City and West Ham, partly through Tower Hamlets, the sub-districts of Whitechapel, Stepney, Limehouse, Poplar (great loop of the Thames at the Isle of Dogs) touching the river, and to the N of these Shoreditch, Bethnal Green, and Mile-end. On the S side, next the river, are Wandsworth, Battersea, Lambeth, Southwark, Deptford, Greenwich, Woolwich, outside these Clapham, Camberwell, and Lewisham, across Lambeth and Southwark are the minor sub-districts of Brixton, Kennington, Newington, and Bermondsey. Leaving out Strand, Tower Hamlets, West Ham, Whitechapel, Limehouse, Mile-end, Clapham, Brixton, Kennington, and Newington, and adding the names of Holborn (part of Finsbury) and Stoke Newington (N Hackney), we have the list of metropolitan boroughs making up the administrative county.

Of the total trade of the United Kingdom, London has 30 per cent. It is, as might be expected, with its enormous population, and its distance from coal, much greater in import than in export, the value of the former approaching nearly double that of the latter. In imports, and in export of foreign and colonial merchandise, it surpasses all other ports, but in total exports, and in exports of the produce of the United Kingdom, it is exceeded by Liverpool. Of the whole imports of the United Kingdom it has nearly one-third, of the total export between one third and one-fourth, of the export of the products of the United Kingdom about one fifth, and of foreign and colonial merchandise more than one-half. An important distribution centre, it is the meeting-place of all the great railway systems of the kingdom (*see* England), and has water communication inland up the Thames valley.

The estuary of the Thames is difficult of navigation on account of the numerous shallows and banks, and improvement of the channel would be very advantageous for trade. The least depth, meanwhile, is 26 ft. at low water of ordinary spring tides, to the S of Leigh Bank about a mile above Southend, and as the tides passing round the N of Great Britain, and those passing up the English Channel, meet here, there are large rises of 21 ft. at

springs, and 17 ft. at neaps, which are very advantageous. There is, over the 20 m between Tilbury and the two-and-a-half-mile-long Pool above Limehouse, on both sides of the Thames, an enormous amount of dock accommodation—the London Docks, St. Katharine Dock (beside the Tower), East and West India Docks, Royal Victoria Dock, Royal Albert Dock, Millwall Docks, Tilbury Docks, Surrey Commercial Docks, &c—with depths sufficient for any size of vessel, and all necessary appliances, but this notwithstanding, there is a steady demand for increased space. There are warehouses and stores suitable for all classes and kinds of goods, and great cold-storage buildings in connection, as well as enormous vaults for the bonding and keeping of wine, spirits, oil, &c. The trade of London is, of course, world-wide, but the great bulk of the commerce with the East Indies, China, and France, is centred here, as well as a large proportion of that with the North Sea continental ports, and with the great wool-producing countries. The industries of London are very varied, the chief being, naturally, those connected with the supply of necessities of every kind to such a large resident, and coming-and-going population—food supply, shipping appliances, clothing (ready-made and otherwise), house and ship fittings and furnishings, textiles, distribution employments, &c., &c.

The total imports are valued at £170,000,000, the chief articles being wool (over £15,000,000, nearly three-quarters of whole quantity entering the country), tea (about £10,000,000, practically almost the whole reaching Great Britain), sugar (over £6,000,000, nearly one-third of the total amount imported), between £1,000,000 and £5,000,000, butter, sawn timber, leather, oats, fresh mutton, tin (ingots, bars, &c.), livestock, wheat meal and flour, wheat, cheese, silk manufactures of all kinds, hemp, raw coffee, fresh beef, wine, jute, petroleum, unwrought copper, cotton manufactures of all kinds, farinaceous substances, woollen manufactures of all kinds, paper and strawboard, iron manufactures of all kinds, lead (pig and sheet), flax or linseed seed, maize, glass manufactures of all kinds, eggs, machinery, tallow and stearine, chemicals, gutta-percha, meat preserved otherwise than by salting, goat skins (undressed), furs, hewn timber, and furniture woods, between £500,000 and £1,000,000, barley, fish, raw hides, silk (raw, and knubs or waste), sheep skins (undressed), drugs other than opium, paper-making materials, bacon, tobacco (unmanufactured), pork (fresh and salted), oranges, leather manufactures (gloves, boots and shoes, &c.), cocoa, condensed milk, indigo, cutch, and gambier (with extracts, and other kinds of dye stuffs), stones (rough or hewn), almonds and other nuts used as fruits, hair of all kinds, fancy goods, silver ore, painters' colours, lard, house-frames and joiners' work, &c.,

rabbits (dressed), oil seed cake, manufactures of skins and furs, gold ore, lace of all kinds, shells, and straw-plait for hats or bonnets, between £100,000 and £500,000, bristles, raisins, currants, fruits preserved with or without sugar, seed-oil, toys and games, pepper, brandy, turpentine, raw bananas, hair, paraffin, raw cotton, manufactured tobacco, cordage, crude zinc, hams, cocoa-nut oil, cotton seed, potatoes, china and earthenware, manufactured cork, embroidery and needlework, raw apples, electrical goods, margarine, nitrate of soda and other manures, quicksilver, musical instruments, poultry and game, hair, zinc manufactures, tomatoes, opium, caoutchouc, kauri gum, raw grapes, manufactures of copper, prints, rum, scientific instruments (not electrical), arms and ammunition, carriages and waggonettes, &c., maize; lemons, limes, and citrons, hops, mineral water, plumage, sponge, onions, ivory, matches, staves, pens, curios, glue, size, and gelatine; olive-oil, essential, and perfumed, &c., oils, asphalt, ornamental feathers, linen manufactures, lead ore, clover and grass seed, slates, canned vegetables, bead trimmings, bladders and casings, printed books, brooms and brushes, canes and sticks (unmounted), caoutchouc (manufactures of), oatmeal and groats, flax, gum arabic, ice, plants, stationery, buttons (not of metal), figs, horns and hoofs, copper regulus and precipitate, bar iron, mica and talc, &c., nuts for oil, rape-seed, and wax. The exports of British and Irish produce are valued at some £57,000,000, the chief articles being cotton piece-goods, and iron and iron and steel manufactures, each about £5,000,000, between £1,000,000 and £5,000,000, apparel, machinery, telegraphic wire and apparatus, woollen and worsted piece-goods, arms and ammunition, chemicals, cotton manufactures (except piece-goods), medicines, and painters' colours and materials, between £500,000 and £1,000,000, railway carriages, paper, woollen and worsted manufactures other than piece-goods, haberdashery and millinery, hardware and cutlery, printed books, boots and shoes, beer and ale, pickles and vinegar, &c., stationery other than paper, copper (wrought and unwrought), jute piece-goods, manure, hats, cement, jams and confectionery, &c., and oil- and floor-cloth, between £100,000 and £500,000, unwrought leather, furniture, &c., oil-seed, implements and tools, caoutchouc manufactures, lead (pig and manufactured), coal products (except dyes), electric lighting apparatus, unwrought tin, earthen and china ware, cycles, linen piece-goods, grease (with tallow and animal fat), and silk manufactures. There is also export of foreign and colonial merchandise valued at about £34,000,000, the chief articles being wool (over £6,000,000), between £1,000,000 and £3,000,000, block tin, raw coffee, hemp (dressed and undressed), jute, tea,

undressed leather, unwrought copper, goat skins (undressed), and tallow and stearine, between £500,000 and £1,000,000, furs, dry hides, and drugs; between £100,000 and £500,000, jute manufactures, sheep skins, indigo, woollen manufactures other than goats' wool, wine, raw cotton, shells of all kinds, raw cocoa, pepper, silk or satin broadstuffs, flax or linseed seed, farinaceous substances, dye stuffs other than indigo, gums except lac and kauri, machinery, chemical manufactures, sardines, condensed milk, spirits; straw plait, &c., for hats and bonnets; lac, silk ribbons, cotton manufactures, quicksilver, leather manufactures, raw fruit, cocoa-nut oil, caoutchouc, wool (shewn and shorn), cured fish except sardines, lead (pig or sheet), ivory, kauri gum, manufactured tobacco, meat preserved otherwise than by salting, raisins and dried fruit, gutta-percha, ornamental feathers, lace, oil-nuts, manufactured cork and vegetable fibre. The tonnage entered and cleared is about 30,000,000, of which some 80 per cent are British. Registered at the port are over 1200 sailing vessels with a tonnage of over 215,000, and over 1650 steamers with a tonnage of nearly 1,500,000.

London, a town of Ontario, Canada, on the River Thames, 116 m. by rail S.W. of Toronto, great railway centre, with iron foundries, machine works, tanneries, petroleum refineries, &c., and white sulphur-springs. Pop 38,000.

Londonderry, or Derry, a seaport in a county of the same name, in Ulster, N Ireland, on the River Foyle, 6 m. from its mouth in Lough Foyle, and 23 from the open sea, 95 by rail N.W. of Belfast, and 163 N N W of Dublin, channel with 16 ft. at low water of spring tides deepens at town to 24 to 40 ft., excellent harbour, with over 2 m of quays along river having 24 ft. at ordinary high water; salmon-fishing, ship-building, linen manufactures (shirts and table linen), distilling, iron-founding, tanning, &c.; trade mostly with Liverpool (185 m) and Glasgow (170 m), with which there is regular communication; imports maize, sawn timber, iron and copper pyrites, phosphates, coal, iron, and general goods, exports agricultural produce. The county is hilly in centre and S, rising on southern border to over 2230 ft, elsewhere flat, drained by Foyle, Bann, and Roe, linen manufactures (shirt-making, &c.), agricultural produce (butter, eggs, poultry, &c.), and fisheries. Area of county, 513,388 acres. Pop 144,404, pop of town, 39,892.

Long Eaton, a town of Derbyshire, England, 7 m by rail S W of Nottingham, with manufactures of net lace. Pop 13,045.

Long Island, an island of the state of New York, United States, 115 m long and 12 to 24 m wide, E of New York Bay, and separated from New York by the East River across which is the famous Brooklyn suspension

bridge, watering-places, market-gardens, fisheries, and oyster-beds To the N is Long Island Sound, an important channel, 110 m long and 2 to 20 m wide, leading from New York Bay to the Atlantic Queensborough (Long Island City, &c.), now part of New York City, at W end of island, has oil-refining, carpet-weaving, and piano-works. Pop of Queensborough, 153,000

Longships, a dangerous reef 1 m W. of Land's End, with a lighthouse visible 16 m

Longton, a pottery town of N Staffordshire, England, 2½ m SE of Stoke-upon-Trent, china and earthenware, coal, and iron-smelting, and brick-making Pop. 35,825

Loochoo Islands, or Riu-kiu, a group of some 40 volcanic and coralline islands, belonging to Japan, half-way between Kiushiu and Formosa, sugar, sago-palm, aromatic oranges, and dye-woods Area, 1860 m Pop 420,000

Lorca, a town of SE Spain, 37 m SW of Murcia, near silver and sulphur mines, with lead-smelting works, and manufactures of cloth and gunpowder Pop 60,000

Lorenzo, or Lourenço, Marques, a seaport of Portuguese E Africa, on Delagoa Bay, vessels discharge by means of lighters, the terminus of a railway from Pretoria Imports timber and general goods, exports gold, wool, and hides, from Transvaal Colony Telegrams, 3s 1d a word Regular communication from London and Southampton British consul-general Pop 5500, of whom 4000 are Europeans

Lorient, or L'Orient, a seaport of the department of Morbihan, N W France, on the Bay of Biscay, 116 m by rail N W of Nantes, harbour takes vessels up to 18 ft, ship-building yards, imports coal, iron, olive-oil, large timber, cod roes, and general goods, exports pit-props, and building and other timber, &c, about half the trade with Great Britain, but mostly carried in French bottoms Pop 45,000

Los Angeles, a town of S California, United States, on Southern Pacific (trans-continental) Railway, near the junction of the Atlantic-Pacific, while lines to Salt Lake City will give communication with the Union and Northern Pacific. It is 483 m by rail SE of San Francisco Port 16 m W of city, with open roadstead on Saint Monica Bay, has 32 to 34 ft of water beside the long wharf, a harbour is being constructed The city is the business centre not only for southern California but also for Arizona and New Mexico, and has a very large trade, the crops and manufactured goods dealt with being estimated to have a total annual value of £20,000,000 The produce of the citrus fruit alone is valued at about £2,000,000 This is sold by the car-load, which contains 362 boxes, each of some 70 lbs Other vegetable products are oranges, walnuts, sugar-beet, grapes, and

wheat Iron ore worked, and steel works and cotton factories with machinery driven by oil-fuel engines are projected There are also in the district coal, copper, lead, infusorial earth, asbestos, silver, borax, salt, and nitre, but most of these wait development Coal is at present largely imported from British Columbia, but it is being superseded by oil fuel. A little cement comes from Germany and Belgium Ceylon tea might be pressed, and there is sale for very high class British goods (well-finished guns, &c), but not for cheap grades Of some 200,000 tons entered and cleared at the port, 27 per cent are British and 66 American. British vice-consul Pop. 102,500

Loughborough, a town of Leicestershire, England, 11 m N N W of Leicester, special manufacture of hosiery, also making of machinery (engines, dynamos, and electrical apparatus) and bricks, bell-founding, &c Pop 21,508

Louisiana, one of the southern states of the United States, at the mouth of the Mississippi, flat and marshy, especially towards the sea, drained by the Mississippi, Red River, and Sabine; coast line of over 1200 m. along the Gulf of Mexico, thickly wooded in parts, (yellow pine, cypress, cotton-wood, oak, &c), cotton, maize, semi-tropical fruits, &c Louisiana is, however, a great sugar-cane and rice state, there being large growths of these along the fertile coast and Mississippi valley; industries, sugar-refining, the preparation of rice, and manufactures of machinery, cotton-seed oil, tobacco, &c, great trade also in rock salt, which is abundant. Area, 45,420 m Pop 1,382,000

Louisville, a town of Kentucky, United States, on the Ohio, 130 m below Cincinnati, largest tobacco mart in the world, other industries, leather, pork-packing, distilling, making of ploughs, machinery, furniture, flour, metal pipes, &c, great distribution centre between N and S Pop 205,000

Louvain, a canal port of central Belgium, 19 m. by rail E of Brussels, and connected with Antwerp by canal (11 ft deep) leading to Rupel River, brewing, bell-founding, chemicals, lace, hosiery, tanning, and distilling Imports general goods, exports coal, iron, bark, potatoes, phosphates, tiles, &c Pop 42,500

Lowell, a town of Massachusetts, United States, on the River Merrimac, 25 m N. of Boston, with great cotton factories, and also manufactures of woollens (carpets, hosiery, &c.), iron goods and machinery, chemicals, paper, leather, &c Pop 95,000

Lowestoft, a port of Suffolk, near the most easterly point of England (Lowestoft Ness), 118 m by rail NE of London; extensive harbour, formed partly by Lake Lothing, which reaches 2 m inland, depth of water in harbour at ordinary high tide varies from 16 to 16 ft, centre of great fishing industry, and

there are spacious fish markets Imports coal, iron, timber, maize, oats, and general goods, exports fish (mostly herring), bricks, grain, flour, &c Pop 29,842

Lubeck, a state and free city of Germany, on the Trave, 12 m from its mouth in Lubeck Bay opening off the Baltic, and 40 m by rail N E of Hamburg Near the mouth of the river is Travemünde, whose harbour has a depth at entrance of 20½ ft From Travemünde to Lubeck the river has a depth of 17½ ft, while the harbour at the latter place has 16½; but dredging is going on so as to give deeper water at the entrance and at Lubeck. The city is connected with the German and Bohemian districts of the Elbe by the Elbe-Trave Canal, and should the great midland canal be constructed, the trade with W and central Germany thus opened up would give a profitable field for fresh activity The industries include machinery, tobacco, tin ware, soap, iron-founding, and glass-making Lubeck is an important centre for trade between Germany and the Baltic countries—Denmark, Norway and Sweden, and Russia—from which it receives grain, timber, spirits, iron, steel, copper, butter, linseed, paper, and tar, from Great Britain it gets coal and coke, and iron and steel manufactures, from France, wines and spirits, and from the United States, petroleum These are interchanged, the products of the E and N for those of the W. and S, and both for colonial and tropical produce, the return goods being re-exported direct, or *via* Hamburg The total value of the imports is put at over £14,000,000; exports at over £12,500,000. There are more than 1,000,000 tons entering and clearing, of which a very small proportion is British, though 11 per cent. of the total trade is with the United Kingdom. Regular communication from London British vice-consul. Area of state, 115 m. Pop 97,000; pop of town, 82,100

Lucca, a town in a province of the same name in northern Italy, 14 m. by rail N E of Pisa, olive-oil of finest quality, spun-silk; spinning and weaving of jute, hemp, and flax; cotton-spinning, and inlaid work. Area of province, 558 m. Pop 318,610; pop of town, 75,000

Lucerne, a canton of central Switzerland, with a chief town of same name; mountainous, reaching a height of 6993 ft.; drained by the Reuss, Emmen, and Wigler, coal, and iron ore, cattle rearing and dairy farming

of the Gumti, a tributary of the Ganges, 199 m by rail W N W of Benares, and 675 W N W of Calcutta, manufactures of gold and silver brocade, muslin, shawls, jewellery, glass, &c; important centre of exchange of grain and timber from the N for raw cotton, iron, and general imported goods; great railway workshops Pop 264,000

Ludhiana, a town in the Punjab, India, 73 m S E by E of Amritsar, about 3 m S of the Sutlej, great corn mart, manufactures cashmere shawls and fine woollen cloth, turbans, scarfs, cotton goods Pop 49,000

Ludwig's Canal, a canal of Bavaria, Germany, extending 107 m from Bamberg on the Main to Kelheim at the mouth of the Altmühl, and connecting the basins of the Rhine and Danube, depth, 5 ft

Ludwigshafen, a town of Bavaria, on the left bank of the Rhine, opposite Mannheim; trade in iron, wood, and coal; manufactures of wool, aniline dyes, soda, waggons, &c. Pop. 62,000

Luleå, a port of Sweden, on the Luleå River, near the N end of the Gulf of Bothnia, starting-point of Gellivara railway; open last week of May to middle of November, depth on bar, 27 ft, in harbour, 16 to 28 ft Imports coal, petroleum, and provisions, exports iron ore, redwood (deals, battens, and boards), and phosphates The iron ore from Gellivara goes mostly to Holland for Germany, to N Germany, and to Belgium, very little coming to the United Kingdom Of 1,200,000 tons entered and cleared, 25 per cent are British, about the same proportion Norwegian, Swedish a little more, and German about 15 per cent British vice-consul Pop 10,500

Lüneburg, a town of Hanover, Prussia, 31 m. by rail S E of Hamburg, on the navigable Ilmenau, near a valuable salt mine, and gypsum quarries, manufactures iron, chemicals, &c., and is famous for lampreys Pop 25,000

Lunéville, a town of the department of Meurthe-et-Moselle, 20 m by rail S E of Nancy, with manufacture of gloves, hosiery, cottons, toys, earthenware, and straw hats Pop 23,500

Lurgan, a town of county Armagh, N E Ireland, 20 m by rail S W. of Belfast, manufactures lawns, cambrics, damasks, and diaper Pop 11,782

Luton, a town of Bedfordshire, England, 31 m. by rail N N. W. of London, and 19 S. of Bedford, chief seat of the straw-plait indus-

and there is a large export of grain, linseed and sunflower seed, kerosene, oil-cake, and wool; depth of water at quays, 24 to 26 ft. Regular communication from London and Hull. Of the foreign shipping more than half is British. British vice-consul. Pop 40,000

Nuneaton, a town of Warwickshire, England, 9 m by rail N by E of Coventry, with good railway and canal (Coventry Canal) communication, spinning and weaving of worsteds, woollens, and cotton, and making of elastic webbing. Pop 24,995.

Nuremberg, or Nurnberg, a city of Bavaria, Germany, 95 m. N W. of Munich, with carving in metal, wood, ivory, and bone, wooden toys, dolls, clock cases, lead pencils, ultra-marine and other chemicals, lithography, &c., great hop market, large exports to India and America, and import trade in colonial produce from the Netherlands, excellent railway and canal communication, the latter by the Ludwig's Canal,

connecting the Danube, Maine, and Rhine. British vice-consul. Pop 261,000

Nyassa, a great lake of S E Africa, 200 m S E of Tanganyika, 350 m. long and with an average width of some 40 m., surface level over 1560 ft, north end shallow, but other end has a depth at places of over 200 fathoms, drained by Shire south to the Zambesi, excellent fishing

Nyborg, a port of Denmark, on Funen island, at the head of a fjord about 3 m long opening off the Great Belt, 17 m. E S E of Odense, harbour varies in depth from 14 to 21 ft., imports grain, coal, timber, cotton-seed, and oil-cake; exports barley, butter, pork, bacon, and cattle. British vice-consul. Pop 7500

Nykoping, a town on the E. coast of Sweden, 100 m. by rail S W of Stockholm, harbour takes vessels up to 12 ft. draught, imports coal, petroleum, and iron; exports iron ore, pig iron, and oats. Regular communication from Tyne. British vice-consul. Pop. 8000.

## O

Oakham, the chief town of Rutland, England, 25 m by rail W S W of Peterborough, iron ore in neighbourhood; manufactures of boots and shoes, and hosiery. Pop 4500

Oakland, a town of California, United States, on the E side of San Francisco Bay, 4½ m from San Francisco with which it has regular steamer connection, good harbour with 22 to 24 ft. of water, fruit-canning, manufactures of cotton, woollen, and jute, fabrics, agricultural implements, boots and shoes, &c. Pop 67,000

Oamaru, the most northerly town in Otago, South Island of New Zealand, 75 m. by rail N N.E of Dunedin, and 152 S W of Christchurch. Two short branch railways afford communication with the interior, centre of an extensive grain-producing district, flour and meal mills, meat-freezing works, and woollen manufactory, large and safe harbour, protected by a strong breakwater, depth at low water 19 to 20 ft, and at high water 24 to 25 ft., vessels of 24 ft draught can lie alongside quays, great stores for grain and frozen meat, imports general goods, exports grain, frozen meat, &c., to a total amount of some £400,000, besides a very considerable amount of produce sent by rail to other ports. Pop 5000

Oberstein, a town of the Grand Duchy of Oldenburg, Germany, on the Nahe, 32 m W S W of Bingen, with grinding and polishing of agates now largely imported from Brazil. Pop. 8500

Obi, a great river of Western Siberia, with a total length of 2800 m, and a basin of 1,151,000 m. It is navigable throughout, and is free from ice from the last week of April to the

first week of November. The Gulf of Obi, into which it flows, W of the Kara Sea, has a length of about 450 m, a width of from 60 to 70, and a depth of 3 to 15 fathoms. It can be reached for a brief period in summer by the Wagatz Strait and the Kara Sea, communication being thus opened up between western Europe and the whole district of Siberia, to which the head waters of the Obi extend. The river boats have a tonnage of 5000

Obok, a French Protectorate of East Africa, on the Somali coast, on the Gulf of Aden, opposite Perim. The port furnishes a coaling station with a good harbour

Odense, a port in the N of Funen, Denmark, 87 m W S W. of Copenhagen, 4 m. in from the sea, depth of water in the fjord 18 ft, and in the canal about 20 ft., imports coal, iron, salt, timber, oil-cake, and general goods, exports grain, butter, eggs, beef, and cattle, manufactures of leather and spirits. Regular communication from Tyne and Leith. British vice-consul. Pop 40,500

Oder, a great river of North Germany, traversing the Empire from the S of Silesia to the Baltic at Swinemunde, with a course of about 550 m of which about 470 are navigable, and a basin of 48,000 m. The most important tributaries from the E are the Warthe and Netze, and from the W. the Bober and the Neisse. By the Finow Canal it is connected with the Havel, and so with the Elbe, and by the Frederick-William Canal with the Spree, and by the Netze-Bromberger Canal with the Vistula. There is a considerable river trade in coal, timber, and grain, but in summer the river falls

so low that traffic is often at a standstill for a considerable time.

Odessa, a great port of south Russia, in the N.W. of the Black Sea, 25 m N E of the mouth of the Dniester, and 90 m N E of the Danube, 968 m by rail S.S.W. of Moscow, and 381 by rail S of Kiev. The depth in harbour varies from 15 to 35 ft., and the ice is never of sufficient strength to close navigation, although it sometimes causes trouble for a week or two. The imports, which have an average value of over £4,500,000, consist of coal, iron and steel, agricultural and other machinery, raw cotton, tea, oils, coffee, fruit, and general goods, and the exports, which sometimes reach a value of over £10,000,000, consist of wheat and other grains, flour, oil-seed (linseed, hemp-seed, and rape-seed)—these three pretty equally divided between the United Kingdom and Holland), cattle, wool, tallow, hides, oil-cake, timber, and sugar. Of about 3,000,000 tons, entered and cleared, some 40 per cent. are British, the rest being almost entirely Russian. Of over 1,200,000 tons of grain exported nearly one-third goes to Holland, and one-quarter to the United Kingdom. Of the total export value, grain has seven-tenths. Sugar refineries, tea-packing establishments, flour mills, tanneries, engineering works, and manufactures of tobacco, soap, and jute, &c. If British merchants wish to open up business they must have commercial travellers, catalogues in Russian, and prices in Russian currency c i f. at Odessa or other well-known Black Sea port. Letters, 3 days; parcels, 8. Regular communication from London, Tyne, and Hull. Distance from London, 3410 m, Liverpool, 3340; Glasgow, 3450, Cardiff, 3230, Bosphorus, 340. British consul-general. Pop 405,000.

Oeland, an island of Sweden, in the Baltic, 88 m long by from 5 to 10 broad, separated from the mainland by Calmar Sound which has a width of from 4 to 17 m, rising from the coast to a central plateau, of about 170 ft; cement, lime, alum, &c., good fishing all round the coast, imports coal. British vice-consul. Area, 530 m. Pop 32,000.

Oerebro, a town of Sweden on Lake Hjelmars, 170 m by rail W of Stockholm, centre of iron mining, and trade in matches. Pop 22,000.

Oesel, an island of Russia, in the Baltic, at the mouth of the Gulf of Riga, about 45 m long, and 25 wide, with good fisheries. Area a little over 1000 m. Pop 52,000.

Offenbach, a town of the Grand Duchy of Hesse-Darmstadt, on the S bank of the Main, 4 m. by rail E by S of Frankfurt, with important manufacture of aniline dyes and other chemicals, machinery, steel ware, leather, silks, and woollens. Pop 50,500.

Ogden, a town of Utah, United States, at the junction of the Weber and Ogden Rivers, 33 m. N. of Salt Lake City, important rail-

way centre at junction of Union Pacific and Central Pacific Railways; manufactures woollen cloth, boots and shoes, &c. Pop. 16,500.

Ogdonsburg, a town of New York, United States, on the S bank of the St. Lawrence, 512 m by rail N.N.W. of New York City; great centre of lake trade, with enormous traffic in grain, a trade in lumber, and manufactures of wooden goods, flour, and leather, constant communication with Prescott, Canada, on the opposite side of the St. Lawrence. Pop 13,000.

Ohio, a great river of the United States, chief tributary of the Mississippi from the E, with a length of 975 m, or from the head waters of the Alleghany, of 1260 m, and a basin of 214,000 m, navigable from the junction of the Alleghany and Monongahela, at Pittsburgh, to the mouth, the width all the way down varying from 300 to 420 yards, large amount of coal traffic.

Ohio, a north-eastern state of the United States, extending from Lake Erie southward to the Ohio River which forms its southern boundary. The surface of the northern part is flat, in the centre it rises to a height of about 1300 ft, and from this falls again southward towards the Ohio River, where there is a great plain with an average elevation of about 1000 ft., drained by the Sandusky, Huron, Maumee, and other rivers flowing to Lake Erie, and in the S. by various tributaries of the Ohio. Excellent communication along the lake, along the Ohio River, and by a net-work of railways. Great coal and iron deposits, oil-fields, natural gas, salt, and gypsum, rearing of cattle and of hogs for pork, large crops of maize and wheat, and rearing of sheep for wool; manufactures of iron and steel (ore being largely imported for smelting purposes), farm implements, carriages, glass, oil, woollens, and cottons. Area, 40,760 m. Pop 4,158,000.

Oise, a department of N France, surface undulating, but nowhere higher than about 780 ft; drained by the Oise river, and its tributaries, flowing to the Seine, and by some small streams flowing northward to the Somme, and to the English Channel, large production of vegetables for the London market, beet-root for sugar, and apples for cider, extensive manufactures of iron, woollens, tapestries, cotton, hemp, lace, paper, sugar, chemicals, &c. The Oise river which has a length of about 160 m is navigable by itself or by a lateral canal, and has communication with the Sambre, Scheldt, and Somme. Area, 2261 m. Pop 408,000.

Oka, an important tributary of the Volga, joining that river at Nijni Novgorod, with a course of about 900 m, of which some 700 m are navigable in spring, the country through which it flows is exceedingly fertile, and there is a large river trade in grain, metals, timber, and salt. Area of basin, 93,000 m.

**Okhotsk, Sea of**, a portion of the N Pacific, penetrating the eastern part of Asiatic Siberia, with the Peninsula of Kamchatka to the E, the island of Saghalien and the mainland to the W, the mainland to the N, and the Kurile Islands across the mouth. The length from N. to S is about 1000 m., and the average breadth about 500 m. The greater part of the coast is, from November to April, inaccessible on account of ice.

**Oklahoma**, a territory of the United States, between Texas and Kansas, surface undulating prairie over 1000 ft above sea-level, drained by the Canadian River and Cimarron River flowing to the Arkansas, partly by the Arkansas itself, and in the S by the Red River and its tributaries, river valleys fertile with good wood, but elsewhere the soil is poor; coal mining. Area, 38,830 m. Pop 398,500.

**Oldbury**, a town of Worcestershire, England, 5 m W by N of Birmingham, in the centre of a coal-mining district, with large iron and steel works, and manufactures of railway plant, aluminum, and chemicals. Pop 25,191.

**Oldenburg**, a grand duchy of N W Germany, with a short coast line along the North Sea, W of the mouth of the Weser, coast-line protected by dykes, and the flat surface of the duchy consists largely of rich marshy land particularly suitable for the grazing of cattle, drained by the Weser, Haase, Jade, and smaller streams, famous for horses, fishing, and some manufactures of only local importance; connection by canal from Wilhelmshaven on Jade Bay with the Dollart. Oldenburg, the chief town, at the head of the estuary of the Hunte, 30 m by rail W N W of Bremen, has iron-founding, manufacture of tobacco, cattle and horse fairs, and a large canal and river trade, depth at quay, 23 ft at low water and 34 ft at high water. Total area, 2479 m., of which over three-fourths are cultivated. Pop 399,500, pop of town, 27,000.

**Oldham**, a town of Lancashire, England, on the Medlock, 7 m N E of Manchester, and 38 E N E. of Liverpool, centre of important coalfield, and with an atmosphere particularly fitted for the spinning of cotton yarn, producing about a quarter of the total spun in the United Kingdom. There is also manufacture of fustian, cotton velvets, sheets, cords, &c., and of spinning and weaving machinery. Pop 137,238.

**Olmütz**, a town of Moravia, Austria-Hungary, on the River March, 130 m N N E of Vienna, important mining and trading centre. Pop 22,000.

**Olonets**, a government of Russia, E of Finland, between Lake Ladoga and the White Sea, hilly in the N W, elsewhere flat, sloping southwards, some 70 per cent. of the surface covered with forests, large trade in timber. The small town of the same name, 12 m from

Lake Ladoga, does not call for particular notice. Area, 57,439 m. Pop 367,000.

**Olympia**, a port of Washington state, United States, at the S. end of Puget Sound 65 m up from the open sea, and 120 m by rail N of Portland, Oregon; good anchorage and safe harbour, imports coal and general merchandise, exports timber; saw mills, flour mills, and making of boots and shoes. Pop 4000.

**Omaha**, the chief town of Nebraska, United States, on the S bank of the Missouri, 774 m by rail W of Chicago and 500 N W of St. Louis; important railway and distributing centre, large trade in grain, and meat-packing; large smelting and refining works (gold, silver, copper, lead, and blue vitriol); petroleum; boiler and machinery works, linseed-oil works, agricultural implements, brewing, and distilling, works of the Union Pacific Railway. British vice-consul. Pop 103,000.

**Oman**, an Arab state in Arabia, between the Persian Gulf (N), the Gulf of Oman (N E), and the Indian Ocean (S E), with a limit inland of probably about 100 m. Surface slopes from the shore up to a mountain chain which reaches an elevation of some 10,000 ft., climate very hot, but the soil is fertile where irrigation is possible. Working of copper, sulphur, and salt, and export of dates, mother-of-pearl, pearls, and limes, imports rice, piece-goods, twist and yarn, silk and silk goods, grain, coffee, oils, sugar and ghee. The bulk of the trade is with the United Kingdom and India. Area estimated at about 82,000 m. Pop estimated at 1,500,000.

**Omsk**, a town of Siberia, Russia, at the junction of the Om and Irtysh, important trading centre, 1866 m by rail E of Moscow, at junction of lines of communication to Russia, East Siberia, and Turkestan. Pop 37,500.

**Onega**, a lake of N W Russia (second largest in Europe) with a length of 145 m, an average width of about 50 m, and a maximum depth of about 1000 ft., though over the greater part of its area the depth is little more than 300 ft., the surplus water is carried off by the Svir, which flows to Lake Ladoga. There is canal communication with the White Sea on the one hand, and with the Volga on the other, and the lake has a very important traffic during the seven months of the year when it is free from ice. A canal parallel to the S shore enables trade to be carried on independent of the severe storms which often cause interruption on the lake itself.

**Ontario**, the most easterly and smallest of the Great Lakes of North America, with a length of 190 m, an extreme breadth of 55 m, an extreme depth of 738 ft, an average depth of over 300 ft, and a surface level 246 ft. above the sea. The flow of water into it is by the Niagara River, and there is a difference of

level between it and Lake Erie of 326 ft. Its outlet is the St. Lawrence. The shores are generally flat, and violent storms are frequent. In winter the ice extends only a few miles from the shore. Navigation with Lake Erie is by the Welland Canal, and there is communication with the Erie Canal and the Hudson by the Oswego Canal, and with the Ottawa by the Rideau Canal. Area, 7210 m; drainage area 21,600 m

Ontario, a province of the Dominion of Canada, W. of Quebec, extending along the N. side of the Great Lakes, with part of the N. along the head of James Bay (Hudson Bay), and bordered N.W. by Keewatin, and W. by Manitoba. The surface is undulating, nowhere rising to any considerable height, drainage carried off by the St. Lawrence and Ottawa and their tributaries (Nelson, Rideau), &c., a large number of streams flowing to the Lakes, Rainy River to the Lake of the Woods, and the Albany and Moose River flowing to James Bay. The climate is much the same as in Great Britain, but with warmer summers and colder winters, heat and cold, however, alike much less felt owing to the dryness of the air. In the S. winter lasts from about Christmas to the latter part of March, and in the N. for a little longer, but never over four months. The genial spring rains of April and May usher in the summer, which lasts from about the middle or end of May to the middle of September, harvest being over by the end of August. There is still a large area under timber—pine, oak, elm, ash, maple, birch, spruce, cedar, &c.—and there are great mineral resources. Coal is wanting, though for manufacturing purposes it is easily and cheaply brought by water from the United States and Nova Scotia; but there are along the district N. of Georgian Bay (the northern part of Lake Huron) great deposits of nickel and copper—the former, about Sudbury (443 m by rail W. by N. of Montreal, and 179 E. by N. of Sault St. Marie), the only important supply of this metal so far known in America, and probably the most extensive in the world, while in the E., the centre, and the W. are iron, copper, lead, silver, gold, mica, asbestos, gypsum, and graphite, and there are brine wells along Lake Huron, petroleum wells in the S.W., and natural gas in the Lake Erie counties. The mineral produce is sent almost entirely to the United States. In the cleared portion of the province there is soil of every kind, and besides the ordinary crops there is production of hemp, flax, tobacco, and sugar-beet. In the peninsula between Lakes Ontario and Erie and Lake Huron, there are excellent crops of maize and tomatoes, and, along the S.E., of peaches, while apples, pears, plums, and grapes ripen well in almost all parts, and form an important source of farming profit. Apples are largely exported, and cold storage

renders it now possible to place large quantities of the more delicate fruits on the European markets. Farmers are also, from year to year, giving more and more attention to dairy-farming (especially the production and export of cheese and butter—the latter now possible by cold storage) and stock-rearing. There are some 10,000,000 pigs, as many poultry animals, 8,000,000 sheep, and over 2,500,000 cattle. The manufactures (for which motive power is obtained from water and imported coal) are extensive and important, having now an annual value of over £60,000,000. The leading industries are the making of all kinds of iron and wooden agricultural implements, waggons and carriages, locomotives and other railway rolling stock, cotton and woollen goods, leather, furniture, flax goods, iron ware and other hardware, paper-pulp and paper, wooden goods, flour, &c. The communications along the St. Lawrence, and by the Great Lakes and canals are excellent, and these and the connections with the railway systems of the United States afford most ample opportunities for trade, as outlets not only for the products of Ontario itself but also of the provinces farther W. The peninsula is well supplied with railways, and the Canadian Pacific and its branches have opened up the whole country along the S. of the province. The total railway mileage is about 6000. Area, 219,650 m. Pop. 2,183,000.

Opobo, a port of Nigeria, West Africa, on a river of the same name, anchorage in 8 fathoms; depth on bar 16 ft. at high water of spring tides, and in river itself from 17 to 19 ft. at same time; imports cottons and woollens, and African trade and general goods, exports palm oil and kernels.

Oporto, a seaport of Portugal, on the N. bank of the Douro 3 m. up from its mouth, and 208 m. by rail N. by E. of Lisbon, manufactures of cottons, woollens, silk and silk ribbons, hats, tobacco, tanning, cork-cutting, sugar-refining, foundries, soap and candle works, centre of port wine trade, with warehouses where over six million gallons of wine can find storage accommodation. The total trade is about one-third of that of the whole of Portugal. British trade requires to be pushed by means of travellers and agents, rather than by circulars and lists. Newfoundland codfish are at a disadvantage as against Norwegian, owing to the preferential duty in favour of the latter of from 8d. to 10d. per cwt. Imports (total value about £3,800,000), iron and other metals, steel, machinery, raw cotton, flax and hemp, textiles, hides, coal, sulphur, petroleum, timber, glass, codfish, food-stuffs, and general goods, exports (total value under £2,000,000), wine, cattle, oranges and other fruits, dried vegetables, sardines, pickled fruits, wool, leather, cork and pit-wood, copper, hides, coarse olive-oil, some

cotton piece-goods, and onions Bar takes vessels up to 16 ft draught, and at high spring tides up to 19 ft draught Of 700,000 tons, entered and cleared, at Oporto, and 1,400,000 at Leixoes, some 700,000 are British Letters, 2½ days Regular communication from London and Bristol Distance from Lisbon, 200 m. British consul Pop 172,500

Oppeln, a town of Silesia, Prussia, on the W. bank of the Oder, 51 m by rail S E of Breslau, with brick works and tanneries, and manufactures of pottery, cement, cigars, and a trade in grain and cattle Pop 30,500

Oran, a port of Algeria, in the province of the same name, 130 m S of Carthage in Spain, and 260 m by rail W by S of Algiers, depth at entrance 40 ft, and inside the harbour of from 18 to 30 ft, imports coal, wood, petroleum, cotton-oil, tobacco, and general goods, exports wheat, barley, oats, wool, cattle, sheep, hides, skins, iron ore, esparto grass, wine, and early vegetables (tomatoes, artichokes, potatoes, and peas) Regular communication from London Distance from London, 1545 m, Liverpool, 1470, Glasgow, 1575, Cardiff, 1365, Marseilles, 530 British vice-consul Area of province, 44,616 m Pop 1,103,500, pop of town, 85,100

Orange, a town of the department of Vaucluse, France, 18 m by rail N of Avignon, with fruit-growing, and manufactures of woollens and silk Pop 10,000

Orange, a town of New Jersey, United States, with a large manufacture of hats Pop 24,500

Orange River, a river of South Africa, forming near the source the dividing line between Cape Colony and Orange River Colony, and near the mouth the boundary between Cape Colony and German South-West Africa. From the N it receives the Caledon and the Vaal, and from the S the Zuku and Hantebeest The height of the banks unfortunately prevents it from being of use for irrigation, for which its waters would be very valuable, and a bar at the mouth, rapids, and falls render it useless for navigation Total length about 1000 m Area of basin about 325,000 m

Orange River Colony, a British colony of South Africa, with the Transvaal Colony on the N W. and N, Natal and Basutoland on the S E, and Cape Colony S and W The extreme length from N E. to S W is about 350 m, the width about 180, and the area about 50,000 m. The surface is plateau from 3000 to 5000 ft above sea-level, with solitary kopjes or barren little hill ranges rising here and there, and with hilly ground along the south-eastern border The drainage of the N. and N W is carried off by the Vaal River (which forms the boundary with the Transvaal Colony) and its tributaries, of the centre

W by the Modder River flowing also to the Vaal, and of the S and S E by the Caledon and Orange River (the latter the S boundary with Cape Colony) and their tributaries The Caledon joins the Orange near the centre of the S border The heat in the centre and W is very great during the summer months (December, January, February), temperatures of 105° Fahr or over being by no means rare; in the E it is somewhat cooler, and the summer mean is about 77° and the winter 46°. The rainfall averages about 24 in, increasing from W to E; but as the river beds have been cut down to a depth of from 30 to 40 ft below the general level of the country, moisture drains rapidly off, and irrigation without costly dams becomes, in many places, almost impossible There is no timber except willows and mimosa along the rivers, and, though the soil is fertile, agriculture is meanwhile possible only in the N and S E, where wheat, maize, and Kaffir corn are, under favourable conditions, grown in considerable quantity Of 30,000,000 acres, however, fewer than 600,000 are under cultivation, and apart from the minerals the wealth of the country is in stock-rearing—cattle, sheep and merino sheep, goats, horses, and ostriches The western division being the driest, the grassy veldt is there best suited for sheep, in the centre where the ground retains moisture better the grass land takes cattle, and grain and other crops are raised, the E produces good crops, but is less suited for stock owing to the severe winters In the N there is an important coalfield, and diamonds are found near Kroonstad in the N., and round Fauresmith in the S E; there is saltpetre in the N E, salt near Bloemfontein, and gold, iron, and other minerals in different parts of the country One main line of railway from Cape Colony northwards runs just outside the western border, and another through the centre of the colony, and from the latter there are several branch lines (total about 400 m), while others that are projected will open up the most important districts The lines belong to the government The annual diamond production is valued at over £1,500,000, and there are local exports of dairy produce, vegetables and fruit, grain and meal, cattle, and tobacco; and foreign exports (partly transit) of wool, mohair, skins and hides, and ostrich feathers Mails from and to London every week, letters, 1d, postcards, 1d, parcels, 1 lb, 1s; and 1s. additional for every pound or fraction of a pound up to 11 lbs., money orders to and from, telegrams, 3s a word Pop probably about 210,000, of whom 130,000 are natives

Oregon, one of the N W states of the United States, with a coast-line of over 300 m along the Pacific, coast rocky, but numerous inlets provide good harbours From the coast-

range the surface rises inland to the Cascade Range with an average height of some 7000 ft, and an extreme height of some 15,000, eastwards it is undulating plateau intersected by various mountain ranges, the average elevation being over 3000 ft, drained by the Snake River and other tributaries of the Columbia, and by the Columbia itself, coal, iron-ore, gold, copper, nickel, quicksilver, silver, manganese, zinc, lead, and platinum, enormous forests, especially towards the W, the pines reaching a great size and furnishing a most valuable lumber export; tanning of salmon caught in the Columbia River, soil suitable alike for mixed farming, grazing, and fruit-growing, exports of apples, prunes, pears, peaches, grapes, and cherries, and also of butter and cheese, considerable growth of tobacco and hops. In the E there are large flocks of sheep, from which a considerable quantity of wool is obtained. Area, 94,560 m. Pop 414,000

**Orël**, a province of S central Russia, with a town of the same name, plateau with a height of about 900 ft, drained by the navigable Don and Oka and their tributaries; agriculture and rearing of cattle and horses of importance, large deposits of coal, with manufacture of iron, locomotives and other machinery, railway carriages, leather, hemp, glass, &c. The town, on the Oka River, 225 m by rail S S W of Moscow, has important manufactures of hemp (ropes, &c) and flour, and a very considerable trade in grain, hemp and hemp-seed oil, and tallow, important railway centre, with communication with Moscow, Riga, Warsaw, the Crimea, and the lower Volga. Area of province, 18,042 m. Pop 2,055,000; pop of town, 70,000

**Orenburg**, a province of S E Russia, with a chief town of the same name, along the Southern Urals which here reach an extreme height of some 5000 ft, rich in minerals, which are, however, not yet developed. The town on the W bank of the Ural River, 925 m by rail E S E of Moscow, has an important trade with Turkestan and the East, dealing in cottons, silks, cattle, horses, hides, wools, fur, and provisions. Area of province, 73,816 m. Pop 1,609,500, pop of town, 73,000

**Orinoco**, a great river in the N. of South America, flowing eastward to the Atlantic, and having, in its upper reaches, a connection by the Casiquiare with the Rio Negro and so with the Amazon. In its course through the grassy plains of Venezuela it has a width of 5 m; and its delta has a breadth of about 120 m from E to W, and an extent along the coast of over 160 m. Only seven of the many mouths are navigable, and sea-going vessels can get up about 250 m to Ciudad Bolívar. The total length is over 1500 m, of which some 900 m. are navigable in the lower part,

and 500 m in the upper part, in addition to which a number of the tributaries are also navigable for considerable portions of their courses. After the wet season (April to September) the river overflows its banks for many miles on both sides. Area of basin about 370,000 m

**Orizaba**, the chief town of the state of Vera Cruz, Mexico, 180 m E S E of the city of Mexico, 4000 ft above sea-level, with important manufactures of cotton, paper, and flour. The volcano of the same name, 20 m to the N W, reaches a height of over 18,000 ft. Pop of town, 31,500

**Orkney Islands**, a group of some ninety islands and islets (thirty-one inhabited, four for lighthouse purposes only), separated from Caithness by the Pentland Firth ( $6\frac{1}{2}$  m), and extending over an area of 50 m. by 30, herring, cod, ling, hake, and lobster, fishing, and export of eggs, and live stock. Area, 240,476 acres, of which nearly half is on the Main Isle, or Mainland, and about one-seventh in Hoy. Pop 28,699

**Orleans**, the chief town of the department of Loiret, France, on the N bank of the Loire, 75 m by rail S S W of Paris, with manufactures of agricultural implements and vinegar, a large distributing trade by river, canal, road, and rail, market gardens. Pop 67,500

**Ormskirk**, a town of Lancashire, England, 12 m N N E of Liverpool, with manufactures of iron, cotton, and cordage. Pop 6857

**Ormuz**, or **Jerun**, an island at the mouth of the Persian Gulf, in the Strait of Ormuz, which connects the Persian Gulf with the Gulf of Oman, 4 m off the coast of Persia, mountainous, with deposits of salt and sulphur

**Orne**, a department of N W France, W hilly, with a large amount of forest, reaching a height of over 1350 ft, E fertile agricultural and pasture land, drained by Orne and by small streams flowing to the English Channel, the Seine, and the Sarthe, large production of cider, spinning and weaving of cotton and hemp, and weaving of linen, bleaching and dyeing, and lace manufacture (Alençon). The river Orne, flowing to the English Channel, has a total length of 94 m, but only the lower part is navigable. Area of province, 2354 m. Pop 327,000.

**Orrell**, a town of Lancashire, England, 2 m W of Wigan, centre of coal district, with cotton-weaving and nail-making. Pop 5436

**Orsova**, Old, and **Orsova**, New, two towns on the Danube, at the Iron Gates, the former on the Hungarian side, and the latter in Servia but in Austrian possession, 480 m by rail S E of Vienna. Pop 5000

**Oruro**, the chief town of the department of the same name in Bolivia, 155 m by rail S S E of La Paz, and about 700 N N E of Antofagasta, with silver, gold, and tin, mining. Area of department, 21,350 m. Pop 86,100, pop of town, 16,000

**Osaka**, or **Ozaka**, a port of Japan, second town in commercial importance in the country, at the head of a gulf of the same name, 5 m from the sea, on the banks of the River Ajikawa, opposite Kobé from which it is 18 m distant by rail, cotton-spinning, shipbuilding, and iron works, trade fell off very much after the opening of the railway to Kobé, but has again revived, returns included with Kobé Distance from London, 11,090 m; Liverpool, 11,015; Glasgow, 11,125, Cardiff, 10,900 Pop 821,500.

**Oshkosh**, a town of Wisconsin, United States, on Lake Winnebago, at the mouth of the Fox River, 80 m by rail N N W of Milwaukee, on a canal route *via* the Lake between Lake Superior and Lake Michigan, great trade in lumber, joinery, furniture, carriages, and matches, pork-packing, and trade in granite. Pop 28,500.

**Oskarshamn**, a port on the E coast of Sweden, opposite the northern part of the island of Oeland, depth at entrance about 24 ft., alongside quay 16 ft., small dry dock—380 ft., imports coal, salt, and general goods; exports granite, and wood (pit-props, battens, &c.), and wood-pulp British vice-consul Pop. 7000.

**Osnabruck** (formerly known in Great Britain as Osnaburg), a town of Hanover, Prussia, 75 m by rail S S W of Bremen The manufacture of the coarse linen fabrics known as Osnaburg has practically disappeared, but there are iron and steel works, and manufactures of machinery and railway plant, gas meters, paper, chemicals, and tobacco Pop 52,000

**Ossett**, a town of the West Riding of Yorkshire, England, 5 m. by rail W of Wakefield, on the Calder and Hebble Canal, centre of coal district with manufactures of heavy cloth (such as is used for the uniforms of army, navy, and police), and the making of shoddy Pop 12,886

**Ostashkoff**, a town in Russia, near the source of the Volga, 100 m N W of Tver, with manufactures of boots and shoes and other leather goods. Pop 10,000

**Ostend**, a seaport of West Flanders, Belgium, on the North Sea, 77 m by rail W N W of Brussels, and 66 m. E of Dover (4 hours), with which, and with London, Hull, the Tyne, and Leith, there is regular communication, railway centre and terminus of Bruges Canal; depth at entrance from 17 to 23 ft. at low water of spring tides, with large wet docks, imports coal, timber, guano, nitrate, and general goods, exports grain, cattle, flax, potatoes, fruits, rabbits, oysters, paper, &c; considerable fishing trade. Distance from Hull, 208 m, Tyne, 280; Leith, 390 British vice-consul. Pop 40,000

**Oswego**, a town of New York, United States, at the mouth of a river of the same name, on Lake Ontario, 35 m by rail N N.W. of Syracuse, 60 m E N E of Rochester, and 326 m. by

rail N.W. of New York City, chief port on the S side of Lake Ontario The falls on the river supply water-power for large corn-flour mills, starch works, knitting mills, &c. Pop. 22,500.

**Oswestry**, a town of Shropshire, England, 18 m. N.W. of Shrewsbury, with tanning and the workshops of the Cambrian Railway. Pop 9579

**Otago**, a provincial district of New Zealand, covering the greater part of the S. end of the South Island, 160 m long, with an extreme breadth of about 180 m, and with a coast-line of 400 m The W is rugged and mountainous, with a great deal of wood and with little land suited for agricultural or grazing purposes; but the centre and E contain large tracts of country suitable for mixed-farming or sheep-feeding—fertile, with a small amount of timber and plenty of water Of a total area of over 16,000,000 acres, it is estimated that 9,000,000 are fit for farming, while over 2,000,000 acres under timber might also be fit for the same purpose, of the rest a considerable amount would do for grazing The mountainous parts are rich in gold-bearing quartz, and the proclaimed gold-fields alone are said to occupy an area of over 2½ million acres The total gold production at present is valued at over £500,000, the best known districts being Gabriel's Gully, Clutha, Wakatipu, Shotoga, and Mount Ida There are large deposits of lignite and extensive beds of slate. Pop, exclusive of Maories, 173,200

**Otaru**, a port of Japan, 90 m N. of Hakodate, with imports of salted fish, and exports of railway sleepers and coal to the value of about £100,000 a year Of 35,000 tons, entered and cleared, 60 per cent. are British, and 20 Russian. Pop 57,000.

**Otchakoff**, a port of Russia, near the mouth of the Dnieper, 40 m. E N E of Odessa, with a ship canal giving better access to the Dnieper and Bug. Pop 7000

**Otley**, a town of the West Riding of Yorkshire, England, on the Wharfe, 10 m N.W. of Leeds, with manufactures of worsteds and woollen cloths, leather, and printing machines Pop 9230.

**Ottawa**, the political capital of the Dominion of Canada, on the S bank of the Ottawa River, 120 up from its junction with the St. Lawrence at Montreal with which there is regular communication by steamer and rail (116 m); with Kingstown and Lake Ontario there is communication by the Rideau Canal. The Chaudière Falls supply a very large amount of water-power to the flour and lumber mills and other works of the city. Ottawa is a great lumber centre, over 700,000,000 cubic ft. passing through the mills every year, and there are important manufactures of matches, flour, and leather. There are also large phosphate

deposits to the E. The total trade of the place is valued at over £1,000,000. Letters, 3½ days; parcels, 12 days. The Ottawa River rises about 300 m. to the N. (of there over 200 navigable), and has a total course of 600 m. to the St. Lawrence, with a basin of 80,000 m. Pop. of town, 60,000

Ottawa, a town of Illinois, United States, 82 m. by rail W.S.W. of Chicago, at the junction of the Fox and Illinois Rivers, coal centre, with manufactures of agricultural implements and cutlery, flour, starch, organs, pianos, &c. Pop. 11,000

Ottumwa, a town of Iowa, on the Des Moines River, 75 m. W. by N. of Burlington, railway centre in the midst of a great coalfield, with manufactures of agricultural implements, cutlery, gardens, furniture, linseed oil, and starch, and with pork-pickling. Pop. 18,500

Oudh, a province of N.W. India, S. of Nepal, and sloping from the Himalayas to the valleys of the Gumti, Gogra, Raptée, and Ganges; productions, &c., are given under the North-West Provinces. Area, 23,966 m. Pop. 12,833,000

Ouse, the name of a number of rivers in different parts of England, of which the most important are the Great Ouse and the Yorkshire Ouse. The first has a course of 160 m. from Northampton to the Wash, and is navigable for small vessels for about 50 m. up, and for barges 100 m. up to Bedford. The Yorkshire Ouse, formed by the junction of the Swale and Ure, has a course of about 60 m. from that point to the Humber of this, 8 m. to Goole are navigable for vessels of 21 ft., and 45 to York for vessels of considerable size; and barges can go up as far as Ripon.

Overland Route, the route from Great Britain to India, Australia, and the East generally, by France, through the Mont Cenis tunnel, and down through Italy to Brindisi, thence by the Suez Canal, Red Sea, and Indian Ocean. It reduces the voyage, as compared with the route round the Cape of Good Hope, by 6000 m., passengers now reaching Bombay

in 15 days, and other parts of India in from 17 to 20

Overijssel, a province of North Holland, lying between the middle of the Zuyder Zee and Prussia, rich grazing land, in the S.E. extensive manufactures of cotton. Area, 1291 m. Pop. 375,600

Oviedo, a province of N. Spain, with a chief town of the same name, having a coast-line of about 200 m. along the Bay of Biscay, and extending inland as far as the Cantabrian Mountains; drained by the Nalon, Sella, and Navia; hilly, with rich valleys; cattle-breeding, wines, cider, fruits, rich in minerals, coal, iron, mercury, copper, manganese. The town, 11 m. inland and 20 m. by rail S.S.W. of Gijón, has iron works, and manufactures of linen and woollen cloth. Area of province, 4031 m. Pop. 613,000; pop. of town, 46,500

Owensboro, a town of Kentucky, United States, on the Ohio, 112 m. by rail, 160 by river, S.W. of Louisville, with tobacco factories, distilleries, foundries, and flour mills. Pop. 13,500

Owen Sound, a town of Ontario, at the head of Owen Sound, off Georgian Bay, Lake Huron, 122 m. by rail N.W. of Toronto, with a large trade in grain and timber, and manufactures of wooden ware, furniture, machinery and woollens. Starting point for Canadian Pacific lake steamers (2nd May to 30th November) to Fort William. Pop. 9000

Oxfordshire, an inland county of S. England, with a length of about 48 m., and an extreme breadth of about 26, flat along the Thames valley, rising to about 700 ft. in the Chiltern Hills in the S.E., drained by the Thames, Chervell, Thame, Windrush, Evenlode, and smaller streams; large number of orchards and market gardens, ironstone, manufactures of blankets (Witney), paper, gloves (Woodstock), agricultural implements, and a little hand lace, good communication by road, rail, and canal. The Oxford and Birmingham Canal gives access to the Midland coalfields. Area, 483,614 acres. Pop. 182,768

## P

Paarl, a town of Cape Colony, 49 m. by rail N.E. of Cape Town, centre of one of the best wine districts in South Africa, with manufactures of wine and brandy, wool-washing, waggon-building, and harness making; trade in fresh fruit. Pop. 8000

Pabna, a town of Bengal, on a branch of the Ganges, 115 m. N. of Calcutta, with indigo manufacture. Pop. 16,000

Pachuca, a town of Mexico, 60 m. N.N.E. of Mexico City, centre of rich silver district. Pop. 40,500

Pacific Ocean, the largest of the five great oceans of the world, extending from the Arctic at Behring Straits to about 40° S., where it passes into the Southern Ocean, and from the W. coast of North and South America to the E. coast of Asia and Australia, with an extreme length of some 9000 m., a maximum breadth (a little N. of the equator) of over 10,000 m., and a width at the S. end of about 7000 m. It occupies nearly one-half of the water area, and about one-third of the total area of the globe. The bottom of the Eastern por-

tion is mainly an undulating plateau from 2000 fathoms to 3000 fathoms deep (4000 fathoms and over off Chile and Fiji), but that of the western part is very irregular, the water shoaling considerably over large areas—from New Zealand along the N.E. coast of Australia, round by the south-eastern and eastern Asiatic Archipelago, and in the seas inside the islands—while it is very deep to the E of New Zealand and off Japan, and the greatest ascertained oceanic depth is 4655 fathoms, or nearly  $5\frac{1}{2}$  m., to the N.E. of Japan. The mean depth is about 2400 fathoms, and the area about 65,000,000 m. Owing to the mountains and main watershed of America being so near the W coast, the drainage area of the Pacific is small (about  $7\frac{1}{2}$  million m.), and less than half that of the Atlantic. The only large American rivers are the Yukon, Fraser, Columbia, and Colorado, from Asia come the Amoor, Hoang Ho, Yang-tse-kiang, Canton River, Mekong, Menam, and smaller streams. The equatorial current passes from E to W. along the tropics, and the return flows pass eastward along the S and N ends, turning northward along the coast of South America as the Peru Current, and northward along the coast of Japan as the Kuroshiwa, and southward along the coast of North America as the California Current. The centre and W have many groups of volcanic and coral islands. Owing to the greater amount of evaporation the water is saltier in the centre than it is S or N.

**Pacific Railways**, trans-continental railways of North America. The Canadian Pacific, practically from Halifax, or, strictly speaking, from Montreal, to Vancouver Island. The Northern Pacific from Duluth (Lake Superior) and St. Paul (Mississippi) to Portland (Oregon) and Tacoma (Washington). The South Pacific—Kansas and New Orleans to San Francisco and Mexico, and with a branch giving a connection with St. Louis and The Union Pacific from Chicago and St. Louis by Omaha to Ogden on the Great Salt Lake, where it is connected with The Central Pacific for San Francisco. There is also a proposal to form a second Pacific line across Canada, from North Bay or Gravenhurst near Lake Huron, through the northern portion of Ontario, through Manitoba, Saskatchewan, Assiniboia, and Alberta, along the Peace River, across the Rocky Mountains by the Peace River, or Pine River, Pass, and through northern British Columbia to the Pacific opposite the northern end of the Queen Charlotte Islands, a little S of the Alaskan frontier, at Port Simpson or Butte Inlet. The route would probably be about 250 m. shorter than the Canadian Pacific (with which branches would give communication), and would open up a new tract of country with minerals and pos-

sibilities in agriculture. The cost would probably be at least £20,000,000. The Grand Trunk Pacific is a scheme for a line midway between that just described and the Canadian Pacific, with Quebec as the summer terminus and St. John as the winter one, and crossing the Rocky Mountains by the Peace River, or Yellowhead, Pass. It is also proposed to extend the Canadian Northern, which is already open to Saskatchewan, westward by Edmonton to the Pacific coast at Butte Inlet, opposite the middle of Vancouver Island, and also to form an extension to Hudson's Bay.

**Paderborn**, a town of Westphalia, Prussia, 50 m. S.W. of Hanover, with a trade in cattle, wool, and fruit, large railway workshops, manufactures of glass, and tobacco. Pop 24,000.

**Padiham**, a town of Lancashire, England, 3 m. by rail W of Burnley, coal centre, with manufactures of cotton. Pop 12,205.

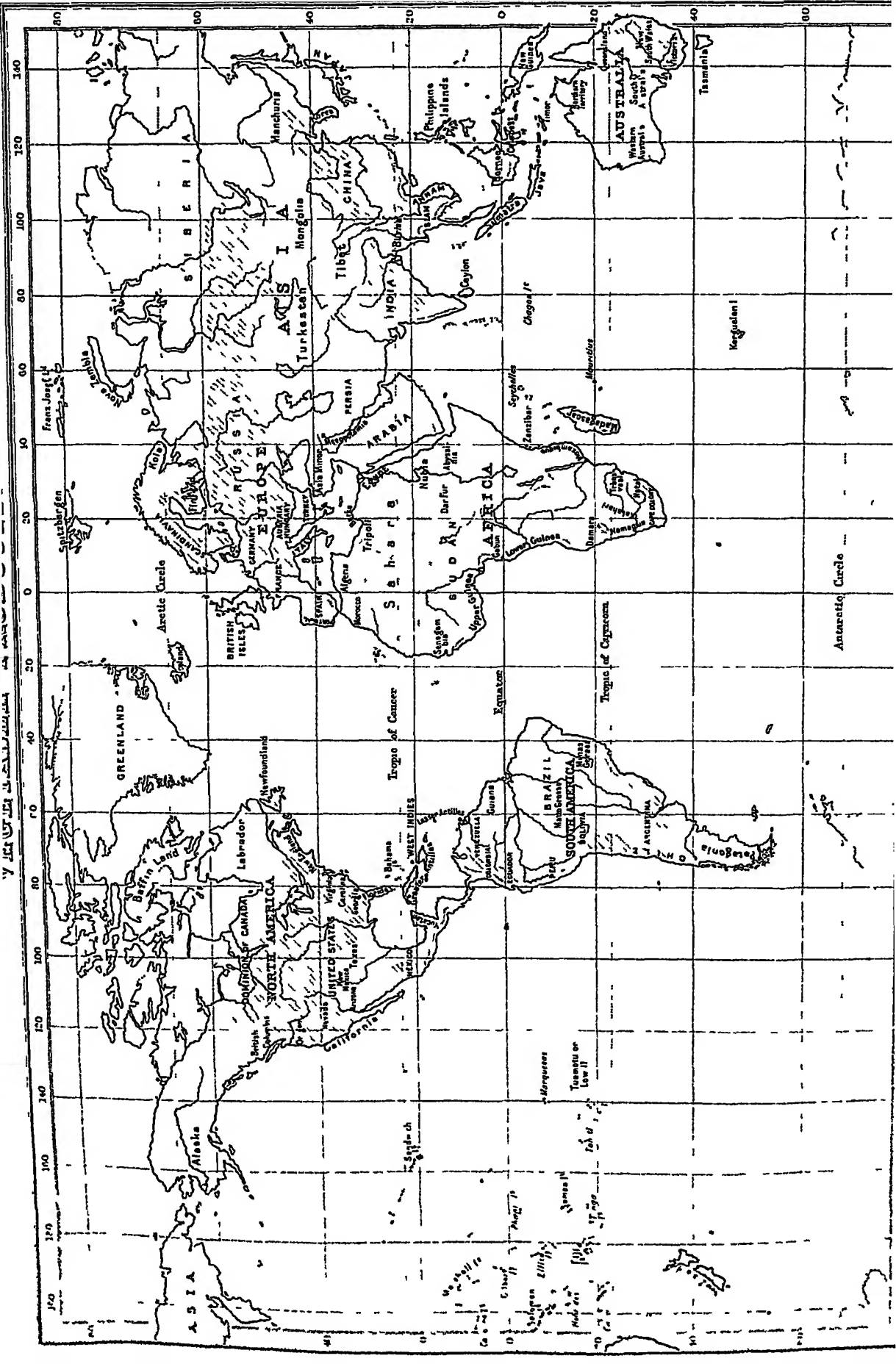
**Paducah**, a town of Kentucky, United States, on the Ohio River 50 m. up from its junction with the Mississippi, and 226 m. by rail W.S.W. of Louisville, railway centre with large railway trade, especially in lumber, manufactures of wooden ware, furniture, flour and saw mills, railway works, &c. Pop 19,500.

**Pahang** See Straits Settlements

**Paisley**, a town of Renfrewshire, Scotland, on the White Cart 3 m. up from its junction with the Clyde and 7 m. S.S.W. of Glasgow; important manufactures of cotton and linen thread, woollen shawls, carpets, and other woollens; corn-flour, starch, chemicals, jam, bleach-works, print-works, and dye-works. The Cart is navigable, with a depth of 8 ft. at low water, and 18 ft. at high water, of spring tides. Pop 79,363.

**Pakhoi**, a port of China on the N. side of the Gulf of Tonkin, deep, wide channel with 4 fathoms at entrance, and from  $2\frac{1}{2}$  to 3 at berths, imports (total value £350,000), cottons, woollens, petroleum, matches, opium, flour, silks, &c., exports (total value over £250,000), sugar, fish, indigo, aniseed oil, hides, leather, pigs, and tobacco. Since the West River was opened for steam navigation, the trade has diminished considerably. Britain has probably over 75 per cent. of the cottons, woollens, metals, and opium, but Germany is pressing. The petroleum is mainly from Sumatra and America. Of over 60,000 tons, entered and cleared, over two-thirds are French, one-fourth German, and only one-thirtieth British. British consul. Pop 25,000.

**Palawan**, an island of the Eastern Archipelago between the N. end of Borneo and the Philippine Islands, separating the Sulu Sea from the China Sea, and divided from Borneo by the Balabac Strait (240 m. long, 25 m.





broad at the widest point) Exports rattans, dammar, and hardwood.

**Palembang**, a district in the S end of Sumatra, with a chief town of the same name, trade in silk and carved wood. Area of district, 53,497 m. Pop. 692,500; pop of town, 46,000

**Palencia**, the chief town of a province of the same name in N Spain, 180 m by rail N N W of Madrid, and 29 N by E. of Valladolid, in the centre of a very fertile plain with vines, a trade in wool, and manufactures of blankets, baize, and other rough woollens. Area of province, 3126 m. Pop. 194,000, pop of town, 15,000

**Palermo**, a port in a province of the same name, on the N coast of Sicily, Italy, 120 m by rail W of Messina, with a large shipping trade, principally with Great Britain, France, and the United States. Depth of harbour from 24½ to 40 ft, and at the quays, 9½ to 19½ ft., dry dock 563 ft long. Imports (total value about £1,300,000), grain, cottons, woollens, silks, linens, coal, hides and skins, live stock, iron, timber, petroleum, machinery, glass ware, and provisions, exports (total value about £1,700,000), oranges and lemons, green and dry fruits, sumach, sulphur, essential and other oils, tartar, manna, lemon juice, wine, &c. Of over 3½ million tons, entered and cleared, over 25 per cent. are British, and over 45 per cent. Italian. Letters, 3 days, parcels, 5½ days. Regular communication from London, Liverpool, and Hull. Distance from London, 2290 m, Liverpool, 2210, Glasgow, 2320, Cardiff, 2100. British consul. Area of province, 1948 m. Pop. 785,100, pop of town, 310,500

**Pallice, La.** See La Pallice

**Palmerston**, or **Port Darwin**, a port in the northern territory of South Australia, on the E side of the inlet of Port Darwin, on the peninsula between the main harbour and Fannie Bay, about 2000 m in a direct line N N W of Adelaide, with which there is regular sea communication. A railway, part of the purposed trans-continental line, runs 146 m inland to Pine Creek. The place is the meeting point of the Australian overland telegraph with the cable *via* the Eastern Archipelago and the Straits Settlements to India, &c. The port is accessible to the largest vessels. Regular communication from London, Liverpool, Glasgow, and Middlesbrough. Distance to Batavia in Java, 1760 m. Rich gold district inland, tin ore also, and pearl fishing towards Melville Island. Pop. nearly 3000, of whom some 2000 are Asiatics, mostly Chinese.

**Pambam Channel**, a shallow passage between India and Ceylon, with a dredged channel which renders it available for vessels of medium size

**Pamir**, a district in Central Asia, at the meeting place of Russian Turkestan, Chinese

Turkestan, Bokhara, and Afghanistan, forming a great plateau with an average elevation of some 13,000 ft., and the starting point of all the great mountain chains of Central Asia. Above the plateau many ridges rise to heights of from 5000 to 6000 ft., and some of the highest peaks around reach heights of over 25,000 ft above sea-level

**Pampas**, great treeless plains in Argentina, to the W N W and S W. of Buenos Ayres, and rising in a series of step-like terraces to the Cordillera. The north-eastern part is exceedingly fertile, and the centre and E afford rich grazing ground, maintaining large herds of cattle and horses, and great flocks of sheep. The western part is barren. In Peru the name is applied to flat districts covered with forests

**Panama**, the north-western department of Colombia, consisting of the Isthmus of the same name, uniting Central and South America, and dividing the Atlantic (Caribbean Sea) from the Pacific, length about 460 m, and width from 31 to 120 m. The Gulf of Panama on the S side of the Isthmus has a length and width of about 100 m. Very unhealthy, Cordillera, with thick forest, varies in height from over 11,200 to 285 ft, caoutchouc, vanilla, coffee, cocoa-nuts, gold, copper, iron, and coal. The neck is crossed by a railway 48 m long from Aspinwall (Colon) on the N. to Panama on the S, and the ship canal is noticed in the following article. The town of Panama has a railway pier with a depth alongside of 25 ft, vessels unable to use it must load and discharge by means of lighters, imports coal, provisions, and general goods, exports hides, skins, tortoise-shell, caoutchouc, mahogany, cedar, cocoa-nuts, balsams, bananas, coffee, and live stock. Panama hats are not made here, but in Ecuador and Peru. Regular communication from London. Distance from London, 11,350 m, Liverpool, 11,275, Glasgow, 11,385, Tyne, 11,650, Cardiff, 11,170 (but see next article). Letters, 19½ days. British consul. Area of department, 31,571. Pop. 300,000, pop of town, 35,000

**Panama Canal.** Across the Isthmus of Panama, near the line of railway, it has long been proposed to construct a ship canal, as such a means of communication between the Atlantic and Pacific would save long distances in voyages from Europe to the latter ocean. It would bring New Zealand 1500 m nearer Liverpool than by Suez, and 2400 m nearer than by the Cape of Good Hope, while the distances to the important groups of S Pacific islands N of New Zealand would be from 500 to 5000 m shorter. A waterway at sea-level, designed by M. Lesseps of Suez Canal fame, begun in 1881, was abandoned in 1891 owing to the extravagance and incompetency of those responsible for the management of affairs, but the construction of a canal along the same

route has now been undertaken by the United States government—which has bought up the rights of the French Company and concluded an agreement with Colombia for a lease of a strip of territory ten miles wide through which the line of communication will pass, and for the control of the waters at Aspinwall and Panama, and of the waters and streams connected with the canal. The lease is for a period of 100 years and renewable at the pleasure of the United States, and the sum of £50,000 is paid annually for the way-leave. An agreement with Great Britain provides for the neutralisation of the waterway, and for its free use, on equal terms, by vessels of all nations. The canal itself will be made sufficient for vessels of the largest size. From the Atlantic at Aspinwall there will be 16 m. of cutting to Bohío, where the Chagres River will be dammed so as to form a lake about 14 m. long, and probably about 102½ ft. above sea-level. Access to this will be by a double lock. Beyond this there will be canal excavated through the divide, in the Culebra cutting, some 200 ft. deep, for about 9 m., at the end of this the Pedro Miguel lock will bring the waterway to a lower level, along which it will proceed for about 1½ m. to Miraflores lock, and beyond that there will be a stretch of about 8½ m. on the Pacific level, and with the channel carried out, to the S. of the town of Panama, to the 6 fathom line. The total length will thus be about 49 m., of which about 35 will be canal and 14 lake. The time of passage for a large vessel will be about 12 hours. The cost has been estimated at £30,000,000, and the cost of annual upkeep and working at nearly £500,000. The works are to be completed within 14 years. By this route the distance from Liverpool to San Francisco would be 8038 m., Callao, 6098, Valparaiso, 7369, Yokohama (*via* San Francisco), 12,574, Shanghai (*via* Yokohama), 13,624, Wellington, 11,273, Sydney (*via* Wellington), 12,186, corresponding distances from Antwerp, 8188, 6248; 7519, 12,724, 13,774, 11,423, 12,336. Bordeaux, 7938, 5998, 7269, 12,474, 13,524, 11,113, 12,086. New York, 5299, 3359, 4630; 9835, 10,885, 8534, 9447. New Orleans, 4698, 2758, 4029, 9234, 10,284, 7933, 8846. *See* Nicaragua.

Pará, a coast state of Brazil, with a chief town of the same name, in the lower part of the Amazon Valley, 1000 m. from W. to E. and about the same distance from N. to S., and with a coast-line of some 700 m. The lower ground yields heavy crops of cacao, sugar, and cotton, and there is considerable export of caoutchouc, Brazil nuts, piassava, &c. The rubber production is valued at over £2,500,000. The town, which is officially known as Belem, stands at the junction of the Capim with the Para River (here 25 m. broad), or Tocantins,

80 m. up from the sea. Depth at entrance of harbour about 25 ft., but vessels drawing over 22 ft. require to anchor 2½ m. off, while at the quays the depth at low water is only some 6 ft. Imports lumber, hardware, furniture, petroleum, and general goods, exports large quantities of india-rubber, Brazil nuts, cacao, hides, and isinglass, the total value amounting to nearly £3,000,000. Of the imports the United Kingdom sends about 27 per cent., the United States 19, Portugal 17, Germany 13, and France and Argentine 10 each; and of the exports the United Kingdom takes 47 per cent. and the United States 48. The proper way to press trade is by travellers who can advise their principals as to market requirements. Of some 1,400,000 tons entered and cleared, about 47 per cent. are British and 36 Brazilian. Letters should be sent *via* Lisbon. Regular communication from Liverpool; distance, 4025 m. British consul. There is a railway (108 m.) to Bragança on the Atlantic. Pará is also the name given to the lower course of the Tocantins River for the last 140 m. of its course. Area of province, 443,790 m. Pop. 328,500; pop. of town, 50,100.

Paraguay, one of the smaller republics of South America, to the E. of the N. end of the Argentine Republic, lying between 21° and 27° 20' S., and between 54° and 58° 40' W.; and bounded N. by Bolivia and Brazil; E. by Brazil and the Argentine, and S.E., S., and W. by the Argentine. The boundary with Brazil on the N. is formed by the Apa and its tributary the Estrella, on the N.E. by the Amambay and Mbaracayu Hills, along the southern part of the E. side and on the S. by the Paraná, and on the W. by the Pilcomayo to its junction with the Paraguay, and then by the Paraguay. The extreme length is about 500 m., the breadth varies from 360 to 190 m., and the area is about 157,000 m. The surface is rolling grassy plain, undulating into low richly-wooded hills which nowhere reach over 1500 ft. The drainage is carried off by the rivers already mentioned and their tributaries, the Paraguay flowing through the centre of the northern portion as well as along the western border. The climate is excellent, spring-like for the greater part of the year, and with plenty of moisture; but the temperature often rises to 100° Fahr. in the hot season (December to February), and there is a very heavy rainfall in September and October. The control of the affairs of the republic lies with a president and vice-president elected for four years, and a congress consisting of a Senate and a Chamber of Deputies. The population numbers some 636,000, of whom over 80,000 are Indians. Of 8000 foreigners only some 250 are from the United Kingdom, nearly 6 times as many Germans, and 4 times as many French. The Paraguay is easily navigable, the Paraná

not so easily, and there is a railway from Asuncion inland, south-eastward, for over 150 m. The roads are mere tracks fit only for animal traffic, or in many cases only for passage on foot. The minerals are still to develop, but iron abounds in the S, marble in the N., and pyrites, manganese, copper, ochre, and china-clay are found. The forests are very valuable, and where water-carriage can be got the products are readily available—the shrub producing maté or South American tea, timber trees and furniture woods, cacao, oranges, quebracho, locust beans, rubber, dye-woods, gums, fibre-plants, &c. The most valuable timber trees and their uses are cucupai (sleepers and piles), cedar (a kind of mahogany—cigar boxes), rosewood (light in colour), ibirano (hard and flexible, heavy, but resists sun and water, and does not warp or crack—carriages and shipbuilding like teak), lapacho (carts, and beams for bridges), quebracho (sleepers, as well as tanning), and urundi-mi (sleepers and piles). Cochineal, wax, and honey are also dealt in, and there is cultivation of sugar-cane (for rum mainly), tobacco, cotton, coffee, tomatoes, haricot-beans, oranges, bananas, pine-apples, and onions. Rubber is being tried. The grassy plains afford excellent grazing, and the rearing of live stock is a very important industry, there being about 3,500,000 head of cattle, many horses and sheep, and, in smaller numbers, mules, pigs, goats, and yaks, the last of moment for traffic purposes. The making of leather, ponchos, palm-leaf hats, lace, &c., are of only local importance, but it is possible that meat-salting and preserving may become valuable. The imports and exports have each a value of about £500,000, but export and import alike take place through the adjoining states, mostly through Buenos Ayres. Of the imports (mainly textiles, wine, and rice) nearly half comes from the British Empire, and of the textiles alone over 80 per cent are from the United Kingdom, which also sends iron ware and tools, and drugs and chemicals. France sends finer woollens, wines, sugar, chocolate, sardines, mercury, perfumes, &c., and Germany cottons and linens, and wire, hardware, tools, &c., but a considerable amount of these seems to be of British origin. The only direct British imports are small quantities of cottons and metal goods, but more might be done through skilled agents in Asuncion selling by sample. Earthenware and glass come from Holland, china from Germany and Austria, window glass from Belgium, table glass from Germany, clocks from the United States and Switzerland, leather from Germany, and fire-arms from the United Kingdom and Germany. The chief exports are maté, hides, tobacco, timber, oranges, hair, tanning materials, orange essence, cattle, and lace. There is a British consul at Asuncion. Mails from and to London every fortnight.

letters, 2½d. per half-oz; postcards, 1d., parcels, under 3 lbs, 2s. 8d., between 3 and 7, 4s., telegrams, *via* France, 3s. 11d. a word, other routes, 4s. 2d. The peso or dollar=100 centavos has a nominal value of 4s. The metric system is supposed to be in use, but the old weights and measures are much more generally employed in ordinary transactions. Quintal = 101 4 lbs avoirdupois, arroba = 25 35 lbs avoirdupois; fanega = 1½ bushel, sino = 69 13 square yards, square league = 12 5 square m. The Paraguay flag has three horizontal bars, red above, white in the middle, and blue below, with in the centre of the white a red bordered oval in which is a yellow five-pointed star in a laurel wreath, or a lion with a five-pointed star above and below and the inscription *Republica del Paraguay*.

Paraguay, a large river of central South America with a course of some 1600 m to the Paraná (of which it is the chief tributary) at the S W corner of the republic of Paraguay, valley rich and fertile with good timber, navigation and regular lines of steamers *via* the Paraná up as far as Cuyaba in Brazil, 2360 m up from Buenos Ayres, chief tributaries from E Cuyaba, Taquari, and Apa, from W Pilcomayo, and Vermejo.

Paraná, one of the great rivers of South America, belonging to the Rio de la Plata basin, rising in the mountains of Brazil about 100 m to the N W of Rio de Janeiro, and having a course of over 2000 m to the Plate. The upper part of the river is known as the Paranahyba and the principal tributaries, mostly from the E, are the Rio Grande, Tiete, Parana-Panema, and Iguassu, from the N and N W it receives the Paraguay and its tributaries, and the Salado. Navigation is difficult owing to shifting sand-banks, but vessels of 16 ft draught can ascend to Rosario (240 m), those of 10 ft draught to Corrientes and up the Paraguay to Asuncion (1240 m). The Paraná itself above Corrientes is navigable to the junction of the Iguassu (1320 m from Buenos Ayres), above which there are great stretches of rapids. Area of basin about 1,100,000 m.

Paraná, a town on the bank of the Paraná River, 400 m up from Buenos Ayres. British vice-consul. Pop. 25,000.

Paria, Gulf of, an inlet of the Caribbean Sea between Trinidad and the mainland of South America, with a northern entrance (The Dragon's Mouth) 13 m wide, and a southern entrance (The Serpent's Mouth) 9 m wide. It is about 100 m long by 50 wide, and the southern shore is formed by part of the Orinoco delta.

Paris, the capital of France and the largest city of continental Europe, on the Seine about 120 m up from the mouth, 288 m (rail, &c.) S S E of London, and 668 by rail W S W. of

**Berlin.** Great railway, road, river, and canal, centre, the valleys of the Oise and Marne giving communication with the N.E., the Seine itself with the E and N.W., the Yonne with the S.W., and the Eure with the valley of the Loire. The advantages derived from these give it, accordingly, a considerable commercial value as a collecting and distributing centre. The industries associated with the city are those involved in the production of "articles de Paris"—that is, objects made from materials not necessarily of any great worth but rendered valuable by the taste and skill of the individual workmanship—decorative articles, jewellery, bronzes, artistic furniture, &c., and there is also the making of clothes on a very large scale, and of boots and shoes, paper, and chemicals. Letters, 8 hours, parcels, 9. Time for noon at Greenwich, 12.9 P.M. British consul-general. Pop 2,714,000

**Parkersburg,** a town of West Virginia, United States, on the Ohio River, 195 m. by rail E by N of Cincinnati, with a trade in petroleum, a large amount of oil-refining, chemical works, saw-mills, and making of furniture. Pop 12,000

**Parma,** a town of northern Italy in a province of the same name, on the River Parma about 13 m S of its junction with the Po, and 79 m by rail S.E. of Milan, with manufactures of silks, pianos, iron ware, and woollens. Area of province, 1250 m. Pop 294,500, pop of town, 49,500

**Paros,** one of the Cyclades, in the Grecian Archipelago, rising on all sides to Mount St. Elias (2530 ft.), which is one mass of marble, and the quarries of which yield the famous white Parian marble, so indispensable to sculptors. The island also produces and exports wine, wool, and figs. Area, 80 m. Pop 8000

**Partick,** a town of Lanarkshire, Scotland, on the N. side of the Clyde and contiguous with Glasgow, of which commercially it really forms a part. Pop 54,298

**Pas-de-Calais,** a department of N. France, with a coast-line of some 70 m along the English Channel, surface flat except in the N.W. where a low line of hills, reaching a height of about 700 ft., forms, as it runs out to sea, the well-known Cape Gris Nez, large crops of grain, sugar-beet, tobacco, flax, and mustard; fishing, extensive coalfields, iron mining, blast-furnaces and iron founding, smelting of copper and zinc, sugar-making, glass works, tanning, and manufactures of lace and net curtains. Area, 2551 m. Pop 955,500

**Passaic,** a town of New Jersey, United States, 11 m by rail N.W. of Jersey City, with print works, and manufactures of iron ware, shoddy, india-rubber, &c. Pop 28,000

**Passamaquoddy Bay,** an inlet of the Bay of Fundy, on the borders of New Brunswick (Canada) and Maine (United States), some 13

m long by 10 wide, and with a tidal rise of 26 to 30 ft., well sheltered, and never obstructed by ice, it is very convenient for navigation.

**Passau,** a town of Bavaria, Germany, at the junction of the Inn with the Danube, and close to the Austria-Hungarian frontier, 72 m by rail S.E. of Ratisbon, large trade in timber, graphite, iron, grain, and salt; manufactures of parquet flooring and leather. Pop 18,000

**Paterson,** a town of New Jersey, United States, on the Passaic River, and connected with the Delaware River by canal, 16 m by rail N.W. of New York City, most important place in America for the manufacture of silk, locomotives, rolling-mills, weaving of cottons, linens, and woollens, and manufacture of paper. Pop 105,500

**Patmos,** one of the Sporades, belonging to Turkey, in the Ægean Sea, with a considerable sponge-fishing off the coast. Area, 20 m. Pop about 4000

**Patna,** a town of Bengal, India, on the Ganges, 140 m by rail E. of Benares; railway and river centre, with large amount of traffic along the Ganges, Gandak, and Son, the total trade being valued at some £12,000,000, articles dealt in, grain, piece-goods, oil-seeds, salt, sugar, and tobacco, great opium factories, a monopoly of the government. There are also a division and a district of the same name. The former has an area of 2076 m and a pop of 1,780,000, the latter an area of 23,675 m, and a pop of 15,900,000. Pop of town, 135,000

**Patras,** a port of W. Greece, on the E. side of the gulf of the same name, 81 m by rail W.N.W. of Corinth, depth at end of bar about 24 ft., imports woollen and cotton goods, grain, timber, sulphur, coal and iron, machinery, hides, leather, &c.; exports large quantities of currants, and also olive-oil, olives, wine, valonea, wool, and skins. Distance from London, 2640 m, Liverpool, 2365, Glasgow, 2680. British consul. Pop 38,000

**Pau,** the chief town of the department of Basses-Pyrénées, 66 m by rail E.S.E. of Bayonne and 143 S.S.E. of Bordeaux, with manufactures of linen and chocolate, apples, eggs, chestnuts, and grapes, famous for its hams, and is a winter health resort (October to May). Some business might be done in oil-cake and artificial manures, as well as in suitable agricultural implements, if they were pushed by travellers. British vice-consul. Pop 34,500

**Paulliac,** a port of the department of Gironde, France, 30 m by rail N.N.W. of Bordeaux, coaling place for deep-sea liners and large vessels too deep to be able to proceed up the river to Bordeaux itself, centre of Médoc claret district, blast-furnaces, imports British and German coal and Spanish iron ore, and has a small export of pit-props and wine. Distance from London, 910 m. British vice-consul. Pop 6500.

**Pawtucket**, a town of Rhode Island, United States, on a river of the same name, 4 m by rail N. by E of Providence, with a fall on the river of over 40 ft. which affords water-power for great manufactures of cottons (cloth, yarn, and thread), woollen cloth, hair-cloth, plush, braid, agricultural machinery, steam fire-engines, and the making of bolts, nuts, and files. Print-bleach- and dye-works. Pop 39,500.

**Paysandu**, a town and a department of Uruguay. The town, on the left bank of the Uruguay River, 200 m by rail N W of Montevideo, can now be reached, up the river, by the largest steamers, although the depth of water still varies with the seasons, imports tinned goods, and exports preserved beef, tinned beef and tongues, tallow, bones and bone ash, dried and salted hides, wool, hair, linseed, &c. British vice-consul. Area of department, 5115 m. Pop 43,500

**Paz, La.** See La Paz

**Peabody**, a town of Massachusetts, United States, 16 m N N E of Boston, with manufactures of different kinds of leather, glue, and carriages. Pop. 12,000

**Pechili, or Chili**, a coast province of N E China, mountainous in N. and W, elsewhere flat and fertile, watered by the Peiho and other streams of less importance, good crops of grain, cotton, tobacco, &c., extensive pits of valuable coal, still practically unworked. Area, 57,800 m. Pop 18,000,000

**Peebles**, an inland county of S Scotland, with a chief town of the same name, surface undulating with rounded grass-covered hills, reaching an extreme height of over 2700 ft; drained by the Tweed and its tributaries, the Talla, Lyne, Manor, Leithen, &c., sheep-rearing, and a little coal in the N, manufacture of shawls, tweeds, and other woollens. Area of county, 222,599 acres. Pop 15,068, pop of town, 5266

**Peking, or Pekin**, the capital of the Chinese Empire, on a sandy plain, 13 m S W of the River Peiho some 110 m from its mouth, at the head of the Great Canal which connects it with the river. There is a railway to Tientsin, at the mouth of the Peiho, a distance of 80 m. The place might, from its position, command a large trade with Central Asia, with other ports of the Chinese Empire, and with Corea, but, meanwhile, the commerce hardly extends beyond the supply of local wants, and the manufactures are of no importance. Time for noon at Greenwich, 7 46 P M. British vice-consul. Pop estimated at 1,000,000

**Pelew Islands**, a group of some 6 inhabited, and 20 uninhabited, islands belonging to Germany, in the W Pacific, S E of the Philippines, with the centre crossed by 7½° N and 134° E, mountainous, reaching extreme height of 2200 ft., surrounded by a coral reef, healthy, with fertile soil producing cocoa-nuts, sugar-

cane, areca-nuts, &c.; turtles and trepang are found, and there are exports of copra, trepang, tortoise-shell, and mother-of-pearl. Area about 190 m. Pop estimated at 8000

**Pelotas**, a port of Brazil on the Rio Grande do Sul, with a great meat-curing industry, and an export of preserved meat, hides, bones, and artificial manure, can be reached only by vessels drawing not more than 10 ft, and loading and discharging requires to be done mostly by lighters. Pop. 42,000

**Pemba**, an island off the E coast of Africa, some 30 m N of Zanzibar, with a length of 46 m, and an extreme width of 4½, formed of coral, cloves (valued at over £120,000 a year), and copra, imports rice, cottons, provisions (the last two mostly from Germany), sugar, &c. The soil is very fertile, and as the island seems to be suffering from over-production of cloves (which has caused a serious fall in price) there seems to be no reason why other crops—rice, sugar-cane, cotton, cacao, vanilla, coffee, rubber, indigo—might not be tried. The fibre of the raphia palm might, possibly, be made more of, as well as the dye-yielding, and timber, trees. Cattle- and sheep-rearing might be extended, and fruit exported, turtle-rearing and trepang fishing are also possible. Cottons might do better with a constant introduction of novelties in colour and design to attract the women, attention being paid to local ideas, and sample designs approved by local judges. Caps, hoes, jungle knives, and axes would probably have sale, and cocoa-nut and olive-oil works might be established. Area about 380 m. British vice-consul. Pop estimated at 30,000

**Pembroke**, a coast county of S W. Wales; undulating from the sea to an extreme height of over 1750 ft on the N, drained by the Teify and Cleddau; some coal, lead, and zinc. The county town, which has the same name, is on Milford Haven, 80 m W by N of Cardiff, with, at Pembroke Dock, 2 m to the N W, but included within the municipal borough, a naval dock-yard and arsenal. Area of county, 395,151 acres. Pop 88,749, pop of town, 15,853

**Penang, or Prince of Wales' Island**, one of the Straits Settlements, in the extreme N W. corner of the part of the Malay Peninsula under British influence. The island itself is oblong, with a length of 15 m, and an extreme breadth of about 10. On the coast of the mainland, distant from 2 to 10 m, is the Province Wellesley, under the same government, stretching 45 m along the coast from the Muda River to a point 10 m S of the Krian River, and extending, on an average, about 8 m inland. About half the island has a flat surface and a fertile soil; the rest is hilly, rising to an extreme height of about 2920 ft. The lower ground produces rice,

cocoa-nuts, bananas, and sugar-cane, and the upper ground cocoa-nut and areca-nut palms. From November to March, during the N E monsoon, the weather is dry, from April to October the S W. monsoon brings rain, the average mean temperature in the lower districts is about 80° Fahr. with an annual range of about 20°, and the average rainfall is about 111 in. The only important products of the island itself are betel-nut and nutmegs. A railway on the mainland opposite connects Penang with Port Dickson near Malacca to the S (317 m), and it is intended that it should be ultimately extended north-west to Burma, and eastward to Siam. The chief town, properly Georgetown, on the E. coast, has come practically to be known as Penang, and is a great centre of trade for the whole peninsula, second only to Singapore. The harbour is reached by a channel with a depth of 4 fathoms at low water of spring tides, and has an anchorage with a depth of from 6 to 12 fathoms. There are 30 ft alongside the quay at low water of spring tides. The imports and exports are each valued at over £12,000,000, the chief imports being cotton, iron, cutlery, and general goods, exports tin, spices, sugar, tobacco, arrow-root, india-rubber, tortoise-shell, tapioca, betel-nut, nutmegs, &c. For mails, &c., see Straits Settlements, letters, 22 days, parcels, 29, telegrams, via Turkey, 3s 4d; other routes, 3s 6d. a word. Regular communication from London and Southampton. Distance from London, 7950 m, Liverpool, 7860; Glasgow, 7975; Cardiff, 7750, Calcutta, 1355; Madras, 1275, Colombo, 1270, Rangoon, 750, Singapore, 375 Area of Penang, 170 m., of Province Wellesley, 293 m. Pop of both, 245,000, pop of town, 111,000.

**Penarth**, a seaport of Glamorganshire, Wales, 2 m S of Cardiff, vessels cannot enter or leave at low water, depth in tidal harbour at quays 30 ft at high water of ordinary springs, and 20 ft. at ordinary neaps. The dock has a depth of 35½ ft. at high water of ordinary springs, and of 25½ ft. at high water of neaps. Imports timber, pulp, and general goods; exports coal. Pop 14,227.

**Peniche**, a town on the E coast of central Portugal, some 50 m N of the mouth of the Tagus, with manufactures of lace. Pop 2000.

**Penicuik**, a town of Midlothian, Scotland, on the North Esk, 16 m. by rail S of Edinburgh, with large paper mills. Pop 3574.

**Pennsylvania**, one of the north-eastern states of the United States, with a coast-line of about 45 m in the N W along Lake Erie, and touching the River Delaware all along the eastern border, low and flat in the S E, rising in the centre to a height of from 1500 to 2500 ft. across the Appalachian Mountains, and sloping thence westward to the basin of the Ohio; drained by the upper waters of the Ohio, the Delaware, the

Susquehanna, and their tributaries; enormous deposits of coal over the whole of the S, and in the N. centre and the W.—both anthracite and bituminous beds; iron found along with the coal, and there are consequently very large manufactures of iron and steel, petroleum and natural gas are also found in very large quantities, and there is mining of copper, zinc, and nickel. Lumber is of importance in N., S., and W., and there are important manufactures of flour, leather, machinery, iron, steel ware, woollens, cottons, glass, and sugar. Area, 44,955 m. Pop 6,302,500.

**Penobscot Bay**, an inlet of the Atlantic, Maine, United States, over 30 m. long, and more than 20 wide, navigable over 60 m. up to Bangor; trade in lumber. It receives the Penobscot River, which has important salmon fishings.

**Penryn**, a port of Falmouth Bay, Cornwall, England, 2 m. by rail N W. of Falmouth; the harbour has a depth of 12½ ft. at high water of stream tides; manufactures of paper, and gunpowder, imports coal and timber; exports granite. Pop 3190.

**Pensacola**, a port of Florida, United States, on a bay of the same name, 244 m. by rail E N E. of New Orleans, depth on bar at high water 32 ft., and with a depth of 16 to 22 ft. at the quays; imports (total value, £38,000), manganese and sulphur ore, fertilisers, sisal hemp, and cement, exports (total value nearly £3,000,000—£1,200,000 to United Kingdom), cotton, pitch, pine, lumber and timber, phosphates, wheat, tobacco, cotton-seed meal, turpentine, resin, and coal. Of over 1,000,000 tons, entered and cleared, 40 per cent. are British. British vice-consul. Pop 18,000.

**Pentland Firth**, a strait on the N E. of Scotland, separating the mainland from the Orkney Islands, with a length of 14 m from E. to W., and a breadth of about 6½ at the narrowest point. Navigation dangerous, the tide flowing through the Firth from W to E with a velocity of from 3 to 10 m an hour, and forming, at many points, dangerous eddies and whirlpools. Pentland Skerries, two rocky islets at its eastern end, about 5 m N. of Duncansby Head, have two lighthouses, of which the higher has a light visible at a distance of 19 m.

**Penza**, a province of E. Russia, with a chief town of the same name; undulating plateau reaching an extreme height of 900 ft., drained by tributaries of the Oka, Volga, and Don; produces grain and hemp-seed, and has considerable river trade, with manufactures of flour, leather, glass, paper, and woollens. exports grain, and hemp-seed oil. The town, 35 m. by rail S E of Moscow, has manufactures of paper and flour. Area of province, 14,997 m. Pop 1,491,500; pop of town, 62,000.

**Penzance**, a port on the S coast of Cornwall, England, the most westerly town in the

country, 10 m E N E of Land's End, and 328 by rail W S W. of London, depth of tidal harbour 16 ft. at spring tides, and 12 ft at neap tides, depth on sill of dock, 21 ft at spring tides and 17 ft at neaps, great centre of mackerel and pilchard fisheries, market gardens, imports timber (American and Baltic) and general goods, exports copper, tin, granite, china-clay, &c Pop. 13,123

Peoria, a town of Illinois, United States, on the Illinois River, 161 m by rail S W of Chicago, great railway centre with connection with the river trade of the Mississippi, and having canal communication with Lake Michigan, coal in neighbourhood, great grain trade, and manufactures of spirits, beer, flour, oatmeal, glucose, starch, and agricultural implements Pop 56,500

Perak See Straits Settlements.

Périgueux, a town of the department of Dordogne, France, on the Isle, 95 m by rail N E of Bordeaux, with iron mines in neighbourhood, and manufactures of woollen cloth, agricultural implements, iron ware, and furniture, railway workshops, famous for Pâtés de Périgueux, which are made of partridges and truffles Pop 32,000

Perim, an island belonging to Britain, about  $3\frac{1}{2}$  m long, and  $2\frac{1}{2}$  wide at the broadest part, in the Strait of Bab-el-Mandeb at the entrance to the Red Sea, 96 m W of Aden, and about  $1\frac{1}{2}$  m from the Arabian coast, and 10 from the African, with a lighthouse visible 22 m, area about 7 m, and extreme height about 250 ft There is a good anchorage on the S side of the island in 5 to 8 fathoms (ships loading and discharging by means of lighters), and the place is an important coaling and provision station, and has tugs, pumps, and other plant, for undertaking salvage operations Telegrams, 3s a word Pop 500

Perm, a province of E Russia, with a chief town of the same name, surface in the E low and flat, and W a plateau reaching a height of some 500 ft, centre intersected from N to S by the Urals, reaching an extreme height of over 5100 ft, drained by Petchora, Kama, Tobol, and their tributaries; half the whole area covered with forests, manufactures of pitch and tar, flour-milling, tanning, &c, very rich in minerals (gold, silver, platinum, copper and malachite, iron, lead, and nickel), and precious stones (sapphires, topazes, beryls, &c.), iron works, and salt works, large transport trade between E and W The town, on the Kama, is about 900 m E of Moscow, and 700 N E of Kazan, with tanning, flour-milling, and oil-works Area of province, 128,211 m Pop 3,003,500, pop of town, 45,500

Pernambuco, a coast state, with a chief town of the same name, in the extreme E of Brazil, with sugar and cotton; forests in the centre and W The town is the most im-

portant in the N of Brazil, manufacture of jute bags, depth on sand-bank, which obstructs entrance to the harbour, 14 ft at low water, and 22 to 24 ft at high water, of ordinary spring tides, imports (total value varying from £1,000,000 to £2,000,000—one-fifth from United Kingdom, one-fourth United States), textiles (cottons, linens, and woollens), coal, hardware, silks, paper, and salt fish and general provisions, exports (total value from £1,500,000 to £5,000,000, depending on the amount and value of sugar and cotton), cotton, sugar, rum, hides, skins, dye-woods, rubber, wax, and cotton seed Of 2,000,000 tons, entered and cleared, 40 per cent are British, and about 35 per cent Brazilian Letters, 14 days Regular communication from Liverpool and Southampton. Distance from Southampton, 3920 m, Liverpool, 4060, Glasgow, 4170, Cardiff, 3960, Bahia, 380, Rio de Janeiro, 1350 British consul Area of province, 49,560 m Pop 1,030,500, pop of town, 112,000

Pernov, or Pernau, a port of Livonia, Russia, on a river of the same name, on the N side of the Gulf of Riga, and about 100 m N N E of the town of Riga, depth on bar and in river, 16 ft, good anchorage outside in  $3\frac{1}{2}$  fathoms, imports (total value £85,000—half from United Kingdom), machinery, artificial manures, iron pyrites, &c, exports (total value nearly £500,000—over half to United Kingdom), flax and tow, linseed, barley, pit-props, baulks, deals, sleepers, &c Of 100,000 tons, entered and cleared, 40 per cent are British British vice-consul Pop 20,000

Perpignan, the chief town of the department of Pyrénées-Orientales, France, 40 m by rail S by W of Narbonne, with a large trade in wine, brandy, silk, and wool Pop 36,500

Pershore, a town of Worcestershire, England, on the Avon, 9 m S E of Worcester, in the centre of a fruit-growing district, with manufactures of stockings and agricultural implements Pop 2700

Persia, a country of south-western Asia, lying between 25° and 40° N, and between 44° and 63° E, and bounded N by Russia, E by Afghanistan and Baluchistan, S and S W by the Gulf of Oman and the Persian Gulf, and W S W by Turkey in Asia The extreme length from E to W is about 850 m, the breadth from the Caspian to the Persian Gulf about 450, and the area is estimated at 628,000 m In the N is the great range of the Elburz, reaching an extreme height of over 19,000 ft, along the S W are a series of parallel mountain ranges running N W and S E, with heights of from 10,000 to 13,000 ft., and the rest of the surface, in the centre and also to the W, is a bare, dry, and barren, plateau, with an average elevation of from 6000 to 8500 ft The whole district from mountains to mountains, S E of Teheran, forms the Dasht-i-Kavir or Great

Salt Desert, with an elevation of some 2000 ft., and covered with thin deposits of saltpetre. In many parts of the waste the soil is excellent, and, were irrigation possible, would produce good crops. The valleys in the S.W., and the slope, 300 m. long and 5 to 30 wide, to the N. of Elburz are extremely fertile, with mulberries and rice, and grapes, oranges, and other fruits, sugarcane, and cotton. Of the whole area, more than half drains towards the interior to salt marshes or lakes, more than one fourth into inland seas and lakes (Caspian, Aral, &c.), and less than a quarter direct to the open sea, and that quarter, owing to the position of the mountains, sends merely short streams, of which the only one of importance is the Karun, flowing to the Shat-el-Arab, at the top of the Persian Gulf. The climate varies greatly, but on most of the plateau is one of extremes—very hot from May to October, and very cold during the rest of the year. The low strip in the N. is damp with excessive heat in summer, and mild in winter, and in the S.E. there is a very pleasant winter and spring, a warm summer, and an oppressively hot autumn. The rainfall, mostly in winter, and entirely absent in summer, is, on the plateau, from 5 to 10 in., but the snow of the hills provides, in many of the districts in their neighbourhood, summer supply that can be used for irrigation. The government is despotic, but the Shah must do nothing contrary to the precepts of the Koran, or to the tradition of Mohammedanism. The pop. is estimated at 9,500,000, of whom only about 1000 are Europeans. The Karun is open for navigation to Ahwaz, 68 m. up from Mohammerah, and there is a railway of 6 m. at Teheran; but elsewhere communication is by very rough tracks for foot, horse, or mule, traffic, except between Ahwaz and Ispahan where the path—still only for animal traffic—has been improved during the last few years. Minerals are abundant, but most of them are still unworked, the distance from markets and the bad communications rendering the transport of them unwrought impossible, while scarcity of fuel prevents treatment on the spot. There are lead, silver-lead, copper, iron, coal (especially in the S.E.), tin, antimony, manganese, borax, salt, and naphtha (all along W. and in part of N.). The chief productions are wool, goats-hair, lamb-skins, silk, opium, tobacco, cotton, wine, sugar, fruit (mulberry, orange, lemon, citron, peach, melon, apricot, pomegranate, almond, quince, and olive), madder, liquorice, roses, asafoetida, and gums; and in Luristan, N. of the Persian Gulf, most of the timber trees of central and mid-northern Europe grow. Manufacture of carpets, felts, shawls, silk, copper; and brass ware, enamelled work, cotton prints, leather, glazed tiles, and attar of roses, as well as dealing in pearls and pearl-shell, are important. The trade is valued

at over £10,000,000 a year, but it is difficult to get any idea of its distribution either by articles or by countries, as no official returns are issued, or, probably, even kept, and a considerable amount passes out and in through Russia. The leading imports may be set down as being cottons, woollens, glass, sugar, petroleum, tea, coffee, drugs, &c.; and the exports as consisting of dried fruits, opium, silk, carpets, wool, skins, leather, cotton, pearls, turquoises, &c. The direct trade with the British Empire takes place through the ports on the Persian Gulf, and for it reference may be made to Bunder Abbas, Bushire, Lingah, and Mohammerah. Of the tonnage entered and cleared at these ports (over 1,100,000 tons) 90 per cent. are British. The imports from Persia to the United Kingdom have a total value of about £200,000, the chief articles being gum, opium, wool, pearl-shell, and woollen manufactures (carpets, rugs, &c.); and the exports to Persia a total value of from £400,000 to £500,000, the chief articles being cottons and cotton yarn (90 per cent. of whole), woollens and worsteds, and copper. There are British consuls-general at Teheran, Bushire, Ispahan, Meshed, and Tabriz; consuls at Kerman, and Resht, and vice-consuls at Bunder Abbas, Mohammerah, and Ser'san. Mails from London, *via* Russia, daily, but return mails uncertain; letters, 2½d per half-oz., postcards, 1d.; parcels, *via* Gibraltar and Bombay, under 1 lb, 4s 4d.; up to 2, 5s., up to 3, 5s 8d.; up to 7, 6s. 10d.; *via* Marseilles or Brindisi, and Bombay, under 3 lbs, 6s. 4d.; between 3 and 7, 7s. 10d., telegrams from 1s 6d to 1s 9d a word according to place. The unit of account is the kran nominally—a franc, but at present worth only about half, or 50 krans=£1, 1 kran=20 shahis=1000 dimars, and one shahi=2 pul. The gold toman is nominally=10 krans, but really=16½ krans at present. The miskal=71 grams, and the batman or man varies in different places from 640 to 2560 miskals, or from about 6½ to about 26 lbs. The measures change in the same way, but the average zar is equal to about 3½ ft. and the farsakh to 3 87 m (though it may rise to 4 17). The jerib=1294 to 1379 sq. yds. The Persian royal standard is white with triangular red corners, bearing in the centre of the white a laurel wreath, inside which is a golden lion passant holding a dagger in its raised paw, and with a golden sun and rays behind. The merchant flag is white with a double border round all the sides except that next the staff, the outer strip red, the inner green.

Persian Gulf, an inlet from the Indian Ocean, passing north-westward between Arabia and Persia, with a length of over 550 m., and a breadth of from 50 to 220, shallow, the extreme depth seeming not to be over 50 fathoms,

and with a great pearl bank stretching along the southern end of the western side. Area about 78,000 m

Perth, a county, with a chief town of the same name, in central Scotland, surface in the extreme S.E. along the lower Tay flat and fertile, elsewhere very hilly, reaching an extreme height of 4000 ft., a large number of mountains over 2000 ft. high, drained by the Forth and Tay and their chief tributaries, the Teith, Allan, Tummel, Earn, &c., and has also a very large number of important lakes (Tay, Erich, Rannoch, Katrine, &c.); large amount of woodland, grouse-moors, and deer forests. The town, in the S.E. on the River Tay, is 18 m by rail N.N.W. of Edinburgh, 62 N.E. of Glasgow and 22 W.S.W. of Dundee, dyeing and bleaching, and manufactures of glass, ink, and linen; valuable salmon fishing on river; vessels of 12 ft can reach harbour. Area of county, 1,595,774 acres. Pop 123,283, pop of town, 32,873

Perth, the chief town of Western Australia, on the N bank of the Swan River, 12 m up from Fremantle; railway centre, with lines running N and S through the coast districts, across country to Albany, and inland to the gold-fields about Coolgardie. Letters, 27 days, parcels, 39. Pop 27,500, including suburbs, 36,500

Peru, a country of the N.W. of South America, lying between  $2\frac{1}{2}^{\circ}$  and  $18^{\circ}$  S, and between  $69^{\circ}$  and  $81\frac{1}{2}^{\circ}$  W, and bounded N by Ecuador, E by Brazil and Bolivia, S by Chile, and S.W. and W by the Pacific. The greatest length from N to S is nearly 1100 m, the average width about 400, the area about 695,700 m, and the coast-line about 1400 m. The surface has a narrow coastal strip rising rapidly to the Andes, which are here formed by three or more parallel chains with a width of some 250 m, running, roughly, in the same direction as the coast, and having, spread out among them, great fertile valleys and tablelands. The mountain tops reach heights of from 21,000 to 22,000 ft, and the plateaux are from 12,000 to 13,000 ft above sea-level. To the E of these Cordilleran ranges is a region of forests and pampas (5000 to 1000 ft in height, 800 m long, and 80 or more wide) sloping to the basin of the Amazon. The drainage of the whole of this region, as well as of the northern and central tableland, is carried off by the head waters of the Amazon itself (Marañon) and of its great tributaries Huallaga, Ucayale (or Apuparo), and Javari, as well as the upper streams of the Jurua, Purus, and Madeira, farther south. Lake Titicaca in the extreme S.E. (with a length of 120 m, a breadth of 40, an area of over 3200, a depth of 925 ft, and a height, above sea-level, of 12,545 ft) belongs to a basin of inland drainage, though it discharges its own waters

southward by the Desaguadero to Lake Aullagas in Bolivia. The rivers of the coastal strip are not of importance. The climate varies, of course, with the height, but on the coast the temperature ranges from  $60^{\circ}$  to  $80^{\circ}$  Fahr; on the tablelands from  $10^{\circ}$  to  $60^{\circ}$ ; and in the western districts from  $61^{\circ}$  to  $86^{\circ}$ . The moisture brought by the damp S.E. trade winds is practically all caught by the Andes, so that none passes over to the W. coast; and that is therefore practically a rainless region, though there are places where the winds finding their way through openings in the mountains cause cloudy fogs, and even occasional drizzle, between May and October. The driest coast period (December to May) is the time of regular rains among the tablelands and mountains, and in the E. rain falls often, and at times very heavily. The snow-line is between 15,000 and 16,000 ft. The affairs of the republic are controlled by a president and two vice presidents, elected by direct vote for four years, and a congress consisting of a Senate and a House of Representatives, the members of both elected also by direct vote. The population is about 4,650,000, exclusive of uncivilised Indians, whose numbers cannot be estimated. There are over 1000 m of railway, some lines penetrating the Andes (see Lima and Mollendo) and others passing along the coast, and on the E the upper waters of the Amazon are navigable, but the roads for wheeled traffic have a mileage of only some 200, the rough tracks which exist elsewhere being fit only for llamas, mules, and horses. The mineral resources, especially in silver, are enormous; but the difficulties of transport, already indicated, are great barriers to progress in working. Associated with the silver are copper and lead, and there are also gold, mercury, antimony, zinc, nickel, iron, manganese, coal, petroleum (all over the N.W.), sulphur, salt, nitrate of soda, and borax. The forests of the eastern slope have timber trees, and also production of cinchona, coca, cacao, rubber, sarsaparilla, wax from the wax palm, and vegetable ivory. There is, besides, cultivation of bananas, vines, olives, cotton, sugar-cane, tobacco, coffee, coca, cacao, &c. The grassy plains afford excellent grazing for the wild vicuñas, the domesticated alpacas and llamas, and cattle. The llamas are much used for traffic purposes. Wool is an important article of export, and there is some little manufacture, though this is of local importance only—cottons and coarse woollens, cocaine, sugar, straw hats ("Panamas"), and cotton-seed oil-cake. The imports are valued at over £2,200,000, the exports at about £4,500,000, and of the former the British Empire sends a little less than half, Germany over one-sixth, the United States nearly one-seventh, and Chile about one-twenty-fourth, while of the exports the

same countries take respectively somewhat less than half, over one-ninth, over one-fifth, and about one-eighth. The leading imports are cottons, woollens, furniture, provisions, and general goods, and the exports ores and sugar (each over £1,000,000), wool, cotton, hides, cocaine, borax, coffee, rice, and guano, but a certain proportion of both import and export is Bolivian. The imports sent by Peru to the United Kingdom are valued at about £1,500,000, the chief articles being copper (ore, regulus, and precipitate), wool (alpaca, vicuña, llama, and sheep), coutchouc, raw cotton, silver ore, Peruvian bark and other drugs, borax, raw sugar, guano, tin ore (very variable), and cotton seed. The exports of British products to Peru are valued at a little less than £1,000,000, the chief articles being cottons (some 40 per cent), woollens and worsteds, iron (wrought and unwrought), and machinery and there is a transit trade of foreign and colonial merchandise (mostly jute manufactures and opium) valued at over £120,000. There are British consuls-general at Lima and Callao, a consul at Iquitos, and vice-consuls at a number of the important places. Mails from and to London every fortnight, letters, 2½d per half-oz., postcards, 1d; parcels, under 3 lbs, 1s 6d, between 3 and 7, 5s, between 7 and 11, 5s 6d, telegrams, 5s 9d a word. The coin of account is the sol=100 centavos=nominally 2s, the gold libra=£1=10 soles. The metric system is in use for customs purposes, but otherwise the weights, &c, in use are the ounce=1·011 oz. avoird, libra=1·014 lb avoird, quintal=101·44 lbs. avoird, arroba=25·36 lbs; liquid arroba=6·7 gallons, gallon=0·74 British gallon, vara=0·927 yards; square vara=0·859 sq yds. The Peruvian flag consists of three vertical bars red, white, and red, with, in the centre of the white bar, a yellow-bordered shield red in the lower half, white in the upper. The red bears a cornucopia, and the white is divided down the centre and has a llama on the left division and a tree on the right. Above the shield is a laurel wreath, and below two laurel branches crossed at the inner ends.

**Perugia**, a town of Italy on the Tiber, 127 m by rail N of Rome, with some small manufactures of silks and woollens, and of liqueurs. Pop 20,000.

**Pesaro**, a town on the E coast of Italy, near the mouth of the Foglia, about 1 m from the Adriatic, and 37 m by rail N W of Ancona, with manufactures of silk, linen, cotton, leather, and glass, and a trade in silk, wine, fruit, and olive-oil; vessels of more than 6 ft draught have to lie off shore in 5 to 6 fathoms, and can only load or discharge if the weather be fine; exports wine, olives, silk, and glass bottles. Pop 18,000.

**Peshawar**, a town of the Punjab, India, 276 m. by rail N W. of Lahore, 11 m. from the entrance to the Khyber Pass, and 119 from Kabul; centre of trade with Afghanistan and Bokhara, sending to these British goods, and other goods and provisions, and receiving in exchange, from the former, horses and mules, fur coats, and fruits, and from the latter, gold, silver, and hides. Pop 95,600.

**Petchora**, a river of N. Russia, flowing from the Urals to the Arctic Ocean, after a course of about 940 m, of which over 700 are navigable; river trade, grain being sent to the N. and furs and reindeer skins received in return; free from ice in the lower part for about four months in the year, and in the upper part for about 5½ months. Area of basin about 127,500 m.

**Peterborough**, a town in Northamptonshire and Huntingdonshire, England, on the Nen, 40 m by rail N.E. of Northampton, great railway centre, with manufactures of agricultural implements and bricks, and a large trade in grain and farm produce; malt and coal; works of Great Northern Railway. Pop 30,870.

**Peterborough**, a town of Ontario, Canada, 80 m by rail N.E. of Toronto, important railway centre, with a trade in lumber and farm produce, and manufactures of agricultural implements and flour. Pop 11,500.

**Peterhead**, a port of Aberdeenshire, Scotland, 44 m by rail N.N.E. of Aberdeen; depth on bar 10 ft. at high water of neap, and 16½ ft high water of spring, tides, great natural harbour of refuge at present being constructed by convict labour, great centre of herring and other fisheries, and with large granite quarries and polishing works in neighbourhood. Imports general goods; exports herring and other fish, granite, &c. Pop 11,794.

**Petersburg**, a town of Virginia, United States, on the Appomattox River, 23 m by rail S of Richmond, with falls giving water-power for cotton, flour, and paper, mills, and tobacco factories, exports granite, cotton, tobacco, bread-stuffs. Pop 22,000.

**Petropaulovsk**, or **Petropavlovsk**, a town of central Asiatic Russia, 170 m by rail W of Omsk, with a trade in cotton goods, these being exchanged for cattle and dairy produce. Pop 15,000.

**Petropaulovsk**, a small port on the E coast of Kamchatka, near the S end of the peninsula with a good roadstead. Pop 900.

**Pforzheim**, the most important industrial town of Baden, Germany, 20 m by rail S.E. by E of Karlsruhe, with iron, copper, chemical, and paper, works, tanning, and a great manufacture of cheap jewellery (gold, silver, &c). Pop 43,500.

**Philadelphia**, a great industrial and commercial town of Pennsylvania, United States, on the Delaware River about 100 m up from the Atlantic, and 90 m by rail S.W. of New

**York City** A ship channel enables vessels of large draught to reach the centre of the city, there being a depth of 27 ft at mean low water, and of 33 ft at high water, of ordinary tides. Dry docks 340 to 550 ft long. Imports (total value nearly £10,000,000, of which over £2,200,000 come from the United Kingdom, and over £1,000,000 from other parts of the British Empire), logwood and other dye-woods and dye-stuffs, chemicals, sulphur, paper-stock, cork-wood, gums, jute, hemp, tin-plate, india-rubber, iron ore, iron and steel, wool, silks, furs and skins, and all sorts of general goods and provisions. Exports (total value £16,300,000, of which over half are sent to the United Kingdom, and £300,000 to other parts of the British Empire), petroleum, iron and steel, grain and bread-stuffs, cattle, cotton, coal, canned goods, locomotives and railway carriages, waggons, sewing machines, leather, &c. Of over 4,000,000 tons, entered and cleared, five-eighths are British. Important shipbuilding, manufactures of carpets and other woollen goods, tapestry and plush curtains, hosiery, knitted goods, horse cloths, cotton goods, floor-cloth, hemp and jute goods, silks, iron and steel goods, hardware and machinery, hats and ready-made clothing, sugar-refining, oil-refining, brewing, dye-works, and chemical works. The total annual production of manufactured goods is valued at nearly £160,000,000. Regular communication from London, Liverpool, Bristol, and Swansea. Distance from London, 3200 m, Liverpool, 3180. British consul. Pop 1,294,000.

**Philippeville**, a port of Algeria, on the S W side of a gulf of the same name, 54 m by rail N N E of Constantine, good harbour with 24 ft at entrance and 20 ft alongside quays, centre of grape district, with tanning, and cork-cutting; imports coal, timber, wine, and general goods, exports wheat, barley, wool, wine, fruits, esparto, cork, hides, copper, sardines, and sheep. The total trade is valued at about £4,000,000 per annum. Regular communication from London. British vice-consul. Pop 28,000.

**Philippine Islands**, a large group belonging to the United States, in the Eastern Archipelago, lying between 5° and 22° N, and between 117° and 127° E, between Formosa and Borneo, with the China Sea on the S. The total number of islands is probably about 100, and they are divided into four groups. (1) In the north Luzon (which contains about one-third of the whole area) with the islands about it (Mindoro, Batanes, Babuyanes, Polillo, Marinduque, &c.). (2) In the centre the Visayas (Samar, Cebu, Bohol, Negros, Panay, Leyte, &c.) and Palawan, Balabac, &c., to the W. (3) To the S Mindanao and the smaller islands about it. and (4) To the S of the Sulu Sea, between Mindanao and Borneo, the Sulu Archipelago. The islands are volcanic, with

coral along the coasts especially on the E, and some of the peaks of the recent and extinct volcanoes reach a height of 10,000 ft. Earthquake shocks are frequent and do a very considerable amount of damage, while there are, in the rainy season, very destructive floods, and in the hot season, especially in May and June, furious typhoons. The temperature in the cold season is 60° Fahr, and the mean average in the warm season about 90° Fahr. There is a cold dry season from the middle of November to the end of March, a warm dry season from the end of March to the end of May, and a wet season from the beginning of June to the middle of November. A large part of the islands is covered with timber, many of the trees being of bulk sufficient for building purposes, while others yield ornamental furniture-woods, dye-stuffs, gums, resins, &c. Gold and iron are worked on Luzon, and coal and lead in Cebu, and petroleum, copper, and china-clay are also found in different parts of the group. It is, however, doubtful whether any of these, with the exception of coal, will pay for working on a large scale. The chief imports (total value about £6,000,000) are coal, rice, and general goods, of which Great Britain sends articles valued at about £1,000,000 a year, chiefly cotton piece-goods and yarn, iron and copper (wrought and unwrought), machinery, and woollens. The chief exports (total value about £5,000,000) are sugar (United States, China, and Japan), hemp (United States and Great Britain), tobacco (both leaf and cigars, mostly to various European countries), copra (to various European countries), sapan wood (China and Japan), and coffee. Of the exports Great Britain takes over £2,500,000, almost entirely hemp, although the tobacco is valued at about £100,000, and we still receive a small quantity of unrefined sugar. Large quantities of hemp and sugar are now also sent to the United States, and from the United States there is considerable import of iron and steel ware, live stock, and provisions. Communication by land is difficult, there being only 160 m of roads in the islands, and one short railway of about 135 m. from Manila to Dagupan. Mails from and to London every week, letters, 2d per half-oz, postcards, 1d, parcels, under 3 lbs, 3s; between 3 and 7, 3s 6d, between 7 and 11, 4s; money orders to and from, telegrams, 5s. 7d to 6s 2d a word, according to place. Parcels about two months. See Manila. Total area, about 114,000 m of which Luzon has over 40,000, and Mindanao over 30,000. Pop estimated at 8,000,000.

**Philippopolis**, the chief town of Eastern Roumelia, Bulgaria, on the navigable Maritza, 110 m by rail W S W of Adrianople, with silk spinning, and manufacture of tobacco, attar of roses, carpets, cotton, &c, production of wine; export of maize, rice, and other grain, eggs

(Germany, Switzerland, Britain, and France), salted and dried yolks and albumen, lamb-skins (Austria and Germany)—total exports, £500,000, imports (total value less than £500,000), cottons and cotton yarn, sewing cotton, jute goods (largely Austrian and Italian), varnishes, drying oil, sugar, rubber goods, hardware, fencing wire, &c. British vice-consul Pop 43,000

**Phillipsburg**, a town of New Jersey, United States, on the Delaware, 72 m by rail W of New York, with iron-mining, rolling-mills, and locomotive and boiler works Pop, 10,000

**Piahy**, a coast state of N E Brazil, drained by the Parnahyba, with cattle-rearing, and deposits of iron, lead, rock-salt, and nitrates, exports hides, &c Area, 116,490 m Pop 268,000

**Pictou**, a port in the N E of the provincial district of Marlborough, in the N end of the South Island of New Zealand, at the head of Queen Charlotte Sound, about 18 m up from the open sea, and 18½ m N of Blenheim, with an excellent harbour with 26 ft alongside quay at low water, freezing plant and exports of frozen mutton, wool, grain, and flax Pop 1000

**Pictou**, a port on the N coast of Nova Scotia, 114 m by rail N N E of Halifax, with a good harbour, depth at entrance 22 ft at high water of ordinary tides, depth at quay 20 to 30 ft, direct communication with the Inter-Colonial Railway, exports coal, and agricultural produce. Pop 3500.

**Pietermaritzburg**, or **Maritzburg**, the chief town of Natal, South Africa, near the River Umgeni, 70 m by rail N of Durban, with some small manufactures of carts, waggons, and leather Pop 20,500, of whom rather more than half are Europeans

**Pillau**, a town of E Prussia, Germany, on the W side of Danzig Bay, on a point at the entrance to the Frisches Haff, 30 m by rail W of Königsberg, good anchorage in 5 to 7 fathoms, depth on bar about 20 ft, and about the same depth at quays See Königsberg Small manufactures of amber, and caviare Distance from London, 995 m, Hull, 900, Tyne, 865, Leith, 895 British vice-consul Pop 3000

**Pilsen**, a town of Bohemia, Austria-Hungary, 67 m by rail W S W of Prague, with coal, iron, and alum, in neighbourhood, important manufactures of glass and glass ware, and very large breweries producing the famous light Pilsen beer Pop 68,000

**Pine Bluff**, a town of Arkansas, United States, on the Arkansas River 120 m up, with iron works, manufactures of cotton-seed oil, and flour, and a large trade in cotton. Pop 11,500

**Pinerolo**, a town of N Italy, 23 m by rail S W of Turin, with manufactures of woollens, silks, cottons, and paper Pop 12,000

**Pinsk**, a town of W. Russia, 170 m S W of Minsk, on the Pina River, with tanning, and trade in grain, linseed, salt, and tobacco Pop. 28,000

**Piotrkow**, a province of Russian Poland, with a chief town of the same name, surface undulating and rising in the S W to a height of over 1500 ft, deposits of lignite and iron; about one-third of the whole surface under forest, manufactures of cottons and woollens, with distilling of potato spirit, starch-making, flour-milling, and beet-sugar The town, 88 m S W of Warsaw, has manufactures of cottons, woollens, agricultural implements, and flour Area of province, 4729 m Pop 1,409,500, pop of town, 31,000

**Piqua**, a town of Ohio, United States, on the Miami River, 75 m N N E of Cincinnati, with iron founding, oil-refining, flour mills, and the making of furniture Pop 12,500

**Piræus**, a port of S E Greece, on the Gulf of Ægina, 5½ m by rail S W of Athens, depth at entrance 5 to 8 fathoms, and 20 to 24 ft at quays; imports (total value about £2,000,000)—Britain over one-sixth, Russia about one-fourth, Germany and France each about one-seventh), grain, coal, cottons (mostly British, but dyed cottons from Germany), sugar and coffee (Austria-Hungary), hardware and iron and steel goods, paints and colours, &c, exports (total value about £2,500,000) ores (see Laurium), valonea, hides, horns and bones, wool, &c, manufactures of cotton, silk, and paper Total trade of about 5,000,000 tons entered and cleared, about one-half being Greek coasters Regular communication with London, Liverpool, and Tyne British consul Pop 42,500

**Pirano**, a port of Austria, on the S side of the Gulf of Trieste, 13 m S W of Trieste, with salt works Pop 13,500

**Pirmasens**, a town of Bavaria, Germany, 34 m by rail W of Landau, with manufactures of leather, boots and shoes, and musical instruments Pop 30,500

**Pirna**, a town of Saxony, Germany, on the Elbe, 11 m by rail S E of Dresden, with manufactures of iron ware, stone ware and glass, and tobacco Pop 18,500

**Pistoia**, a town of Italy, 21 m. by rail N W. of Florence, with manufactures of iron and steel ware, fire-arms, cottons and woollens, and silk-spinning Pop 24,000

**Pittsburg**, a town of Pennsylvania, United States, at the junction of the Alleghany and Monongahela Rivers forming the Ohio, 445 m by rail W S W of New York, 355 W of Philadelphia, and 470 E S E of Chicago, in the centre of a great coalfield, and its manufactures are now also largely carried on by means of natural gas and petroleum brought in from the surrounding districts, enormous manufactures of iron and steel, and of iron and steel wares of every kind, manufactures of glass and glass

ware, silver and silver-plated goods, smelting of copper, making of tin goods, brass and bronze, furniture, white-lead, lead pipes, paint, machinery and tools, electric lighting apparatus, patent bristles, warrens and carriages, flour, cotton, paper, &c. There is also a very large trade by railway and river, the latter affording a convenient and important outlet for the export of coal. Pop 322,000

**Pittsfield**, a town of Massachusetts, United States, 150 m by rail W. of Boston, with manufactures of cottons, woollens, and silks, and boots and shoes. Pop 22,000

**Pittston**, a town of Pennsylvania, United States, on the Susquehanna, with large supplies of coal in the neighbourhood, and with manufactures of iron ware, woollen goods, and silk. Pop 13,000

**Plate River** See La Plata

**Plauen**, a town of Saxony, Germany, on the Elster, 78 m by rail S. of Leipzig, with important manufactures of fine white cottons (such as muslin, cambric, jaconet, &c.), embroidered cotton, ready-made clothing, paper, &c. Pop 74,000

**Plauen**, a town of Saxony, Germany, 3 m S.W. of Dresden, centre of a large coalfield. Pop 12,500

**Plock**, a province of Russian Poland, on the borders of Prussia, surface sloping from the Vistula to heights of over 1000 ft.; drained by the Vistula and its tributaries; exports grain. The chief town, of the same name, is on the Vistula 60 m. W.N.W. of Warsaw, and has a considerable river trade in grain and wool, manufacture of matches. Area of province, 4200 m. Pop 557,000; pop of town, 27,000

**Plymouth**, a town of Devonshire, England, on the N. side of Plymouth Sound, 53 m by rail S.W. of Exeter, and 246 W.S.W. of London, between the Plym and the Tamar, excellent anchorage with a depth of 20 ft. at low water; tidal basin with 27 ft. at low water of spring tides, imports (total value about £1,500,000), timber, grain, refined sugar, fruit, hemp, nitrate of soda and other manures, iron and copper pyrites, olive-oil and oil-seed cake, raw hides, glass, and general goods; exports (total value about £130,000), china-clay, &c.; fishing centre. The place is a port of call for many of the chief shipping lines and has regular communication with almost all parts of the world. *Plymouth Sound* proper has a length and width of about 3 m, and the anchorage is protected by a great breakwater, a mile long, stretching across the Sound; finished in 1841 at a cost of £1,500,000. There is a government dockyard, and stores, and in the estuary of the Tamar is an extensive and strongly fortified anchorage for men-of-war and other vessels of the largest size. Distance from Southampton, 133 m; London, 310; Liverpool, 354; Glasgow, 470; Cork, 255. Pop 107,500

**Plymouth**, a town of Pennsylvania, United States, on the Susquehanna, in the centre of an important coal district. Pop 14,000

**Po**, a great river of northern Italy, flowing through the extensive provinces of Piedmont and Lombardy, between the Alps and the S. end of the Apennines, with a total course of some 360 m. At its mouth is a large delta some 65 m. from E. to W., and 60 m. from N. to S., which rapidly increasing area requires all the great amount of sand brought down. Navigation is impeded by sand-banks when the river is low, and by the strength of the current in spring and summer when it is swollen by the melting of the snow. A large amount of water is, however, reserved for irrigation purposes, and there are canals for, corn, and other things, of some little value. The river is connected with the Ticino by the Cavour Canal, and other canals provide communication in different directions. Area of basin about 25,000 m.

**Podolia**, a province of S.W. Russia along the Austrian border, surface undulating, reaching a height of over 1100 ft., drained by the Dniester and Bug; about one-fourth of the whole surface is covered by forests, the fertile soil produces heavy crops of grain and tobacco, &c.; excellent pasture for cattle, manufactures of tobacco, sugar, flour, and woollens. Area, 16,224 m. Pop 3,012,000.

**Pola**, a port, chief naval station and arsenal, of Austria-Hungary, in the S., on the peninsula of Istria, 10½ m by rail S. of Trieste; fine harbour with anchorage for the largest ships afloat, but merchant vessels are allowed to use only the anchorage N.E. of the little island of Oliva, or the town quays, where the depth is but 18 ft., imports naval stores of all kinds, exports considerable quantities of sand for the glass works at Venice. Pop 45,500

**Pollokshaws**, a town of Renfrewshire, Scotland, 3 m. S.S.W. of Glasgow, with spinning and weaving of cotton, bleaching, printing, and dye-works, manufactures of tapestry and chenille, and paper-making. Pop 11,360.

**Poltava**, a province of southern Russia, with a chief town of the same name, undulating surface with an extreme height of about 600 ft., falling south-westward to the Dnieper, by which and its tributaries the district is drained; fertile soil with large crops of grain, tobacco, and sunflowers (seeds for oil), and rearing of cattle and sheep, distilling, flour-milling, and manufacture of tobacco, great trade in tobacco, wool, and skins. The town, 88 m by rail S.W. of Kharkov, and 450 N.E. of Odessa, has manufactures of tobacco and leather, and great fairs for wool and live stock. Area of province, 19,265 m. Pop 2,795,000, pop of town, 53,500

**Pomerania**, or **Pommern**, one of the Baltic provinces of Prussia, surface flat, forming part of the Great North German Plain, but rising

at one or two points to a height of about 700 ft, important agricultural district, with rearing of cattle, horses, and geese and other poultry, and large production of rye and potatoes; crops of less importance, flax, beet-root, tobacco, and hops, distilling, and manufacture of beet-sugar, tobacco, leather, and chemicals, ship-building at Stettin, and good fishing along the coast. Area, 11,628 m Pop 1,635,000

**Pondicherry**, the most important of the French possessions in India, on the Coromandel Coast, 55 m. S by W of Madras City. The town has an anchorage about three-quarters of a mile off shore in 6 to 8 fathoms, exports ground-nuts and ground-nut oil, hides and skins, &c. British consul. See French India. Pop of district, 174,500, of town, 46,000

**Pondoland**, a district of the extreme E of Cape Colony, some 65 m long by 30 wide, lying along the border of Natal, undulating surface with forests of timber-trees, and with fruit trees (bananas, oranges, lemons, &c), soil and climate suitable for rearing of cattle, sheep, and horses, maize, &c. Area, 4040 m Pop 188,000

**Pont-à-Mousson**, a town of the department of Meurthe-et-Moselle, on the Moselle, 18 m S by W of Metz, with blast-furnaces, and manufactures of locks and other iron ware, plush, and velvet. Pop 13,000

**Pontefract**, a town of the West Riding of Yorkshire, England, 21 m SSW of York, with market gardens and nurseries, and a trade in grain. Pop 13,422

**Pontiac**, a town of Michigan, United States, on the Clinton River, 26 m by rail NNE of Detroit, with manufactures of iron ware and a trade in wool and agricultural produce. Pop 10,000

**Pontypool**, a town of Monmouthshire, England, 9 m N by W of Newport, with coal and iron in neighbourhood, and large tin-plate works. Pop 6126

**Pontypridd**, a town of Glamorganshire, Wales, on the Taff, 12 m by rail NNW of Cardiff, with iron and coal in neighbourhood, blast-furnaces, brass works, making of chains and cables, and chemical works. Pop 32,319

**Poole**, a port of Dorsetshire, England, on the N side of Poole harbour, depth at bar 10 ft at low water of ordinary spring tides, and about 16 ft at high water of spring tides, and 15 ft at high water of neap tides, imports (total value about £130,000), timber, oil-seed cake, grain, and general goods, exports (total value about £11,000), china and pipe clay. Poole harbour is a shallow tidal inlet, with an extreme length of about 7 m, and a width of about 4. Pop of town, 19,461

**Poona**, a town of India, in a district of the same name, 119 m by rail SE of Bombay, with some small manufactures of cottons, silks, and jewellery, and making of clay figures

Area of district, 5369 m; pop. 1,070,000; pop of town, including cantonment, 153,500

**Portadown**, a town of Armagh, Ireland, on the Bann, 25 m. by rail SW of Belfast, railway centre, with manufactures of cambric and linen sheeting, and trade in agricultural produce. Pop 10,092

**Port Alfred**, a port on the SE coast of Cape Colony, at the mouth of the Kowie River, with a bar which can be passed only by vessels of less than 12 ft draught, a little trade in wool. Pop 1100.

**Port Arthur**, a naval station leased by Russia on the Liaotung Peninsula, Gulf of Pechili, China. See Dalny

**Port Arthur**, a small port of Ontario, Canada, on Thunder Bay an inlet of Lake Superior; the western terminus of the Lake Superior division of the Canadian Pacific Railway, and a port of call of the Lake Steam Ship Line, 1010 m. by rail W of Montreal. Pop 3500

**Port Augusta**, a port of South Australia, at the head of the navigation of Spencer Gulf, 250 m by rail NW of Adelaide; reached by channel dredged to 28½ ft. at low water, so that it is now accessible to largest steamers; imports general goods, and exports wool, wheat, flour, copper ore, hides, skins, and tallow, large ostrich farm close at hand. Regular communication from Liverpool. Pop 2500

**Port-au-Prince**, the chief town of Hayti, on the W. coast, vessels anchor in 45 fathoms, and load and discharge by means of lighters; imports general goods, and exports coffee, cocoa, logwood, and mahogany. Total trade of about 5,500,000 tons entered and cleared. Letters, 15 days. British consul-general. Pop about 55,000

**Port Darwin**, a great inlet on the NW coast of the Northern Territory of South Australia, 2 m wide at entrance, where the depth is 15 fathoms, while inside, the depth varies from 4 to 15 fathoms; entirely free from obstructions, with deep water close to the shore, and completely sheltered from both NW. and SE monsoons

**Port Dinorwic**, a small port of Carnarvonshire, Wales, on the Menai Strait, with 8½ ft. at low water, and 13 at high water, of ordinary tides, exports slate from Llanberis quarries

**Port Elizabeth**, a port in the SE of Cape Colony, S Africa, on Algoa Bay, 430 m by sea, or 839 by rail, E of Cape Town, and 449 S by W of Bloemfontein, anchorage in 6 to 8 fathoms, vessels of more than 15 ft draught loading and discharging by lighters, imports general goods, exports wool, skins, hides, mohair, cotton, linseed, diamonds, gold, ivory feathers, &c. Parcels, 23 days. Pop 26,000, of whom over half are Europeans

**Port-Glasgow**, a port of Renfrewshire, Scotland, on the S side of the Firth of Clyde, 20 m. WNW of Glasgow; average depth of

harbour 12 ft., with depth at quays varying from 7 to 24 ft., large imports of timber from Canada, and timber ponds; exports coal, iron and steel, and machinery, shipbuilding, saw-mills, iron and brass founding, making of sails and ship fittings Pop 16,857

**Port Huron**, a town of Michigan, United States, on the St. Clair River at its exit from Lake Huron, 60 m by rail N N E of Detroit, with railway communication with Canada by a tunnel under the St. Clair River, great trade in lumber and grain, shipbuilding, sawmills, and railway workshops Pop 19,500

**Port Jackson** See Sydney

**Portland**, a port of Maine, United States, on Casco Bay, 108 m by rail N E of Boston, and 297 S E of Montreal, with which there is communication by the Grand Trunk Railway of Canada and its leased lines, so that grain from Manitoba and British Columbia finds an outlet here, 30 ft. of depth at low water in channel and at quays, great elevators belonging to Grand Trunk Railway, imports general goods, exports grain (wheat, maize, oats, &c.) and flour, dairy produce, apples, pork, lard, lumber, cattle, sheep, cotton, dressed beef, canned meat, and fish, rolling mills, and manufactures of locomotives, boilers, and machinery, refining of sugar and petroleum, important centre of cod, mackerel, and lobster, fishing Regular communication from Liverpool and Glasgow Distance from Liverpool, 2935 m, Glasgow, 2790, Halifax, 310, St John, 125. British vice-consul Pop 50,500

**Portland**, a port of Oregon, United States, at the head of the navigation on the Willamette River, 12 m up from the Columbia and about 120 m from the sea, can be reached by vessels up to 24 ft draught, for which there is depth alongside quays, depth to be increased to 25 ft.; imports (total value about £500,000), jute bags, hemp, jute-matting, raw silk, cement, and general goods, exports (total value over £2,200,000), wheat and flour, barley, lumber, cotton cloth, beef, and raw cotton in transit, iron founding, saw-mills, canning of salmon, &c. The bulk of the exports go to the United Kingdom and to various parts of the British Empire. Of over 900,000 tons, entered and cleared, nearly half are British Regular communication from London Distance from San Francisco, 600 m British consul Pop 90,500

**Portland, Isle of**, a peninsula of Dorsetshire, England, 4 m by rail S of Weymouth, with a length of  $4\frac{1}{2}$  m from N to S, and a width of  $1\frac{1}{2}$  m, connected with the mainland by the shingle Chesil Bank  $10\frac{1}{2}$  m long, valuable quarries of the famous oolitic limestone known as Portland stone. The most southerly point is *Portland Bill* with two lighthouses, 210 and 136 ft. above high water, visible at a distance of 21 and 18 m. respec-

tively Off this, between the point and a dangerous reef known as the Shambles, is the 3 m wide channel known from the swiftness of the tidal current as Portland Race *Portland Roads* to the N of the Isle is a great national harbour of refuge, protected by a breakwater  $1\frac{1}{2}$  m. long, extending first E N E, and then N, from the N E corner of the isle, constructed by convict labour in 1849-72, depth of anchorage inside mostly from 2 to 5 fathoms, strongly fortified

**Portmadoc**, a small port on the S coast of Carnarvonshire, Wales, 16 m S S E of Carnarvon, with harbour dry at low water, and with a depth of 13 ft at high water, of ordinary tides, exports slate from Festiniog quarries

**Porto Alegre**, the name of two ports in Brazil, the one 370 m S S W of Bahia, with exports of coffee, rose water, and cotton and the other on the Rio Grande do Sul at the N end of Lake Patos, available for small vessels, the depth on the river bar varying from 9 to 12 ft., latter imports general goods and exports hides, horns, bones, hair, and wool, British consul Pop (1) 9000, (2) 52,500

**Porto Rico**, an island of the Greater Antilles in the West Indies belonging to the United States, 75 m. E of Hayti, over 100 m long from E to W., and about 40 broad, rising from the coast to a ridge running from N W to S E, and having an extreme height of over 3650 ft., drained by a number of short rivers flowing from the higher ground to the sea all round Upper part covered with forest, flat districts along coasts, and along the lower river valleys, very fertile and highly cultivated, especially in the W The chief products are coffee and sugar, and there is also considerable production of tobacco, and rearing of cattle, both for export There is also production of salt, and growing of rice, bananas, pine-apples, oranges, and vegetables. The imports and exports are valued at about £3,500,000, almost equally divided, and the bulk of the trade is done with the United States, although there is some small trade with Great Britain in jute, cottons, machinery, and iron A considerable quantity of molasses goes to Nova Scotia, dried fish, potatoes, cabbages, and lumber, being received in return There are about 150 m of road and 140 m. of railway along the coast Mails from and to London every month, letters, 2d per half-oz., postcards, 1d., money orders to and from, telegrams, 4s 2d a word British consul, and a number of vice-consuls Area, 3550 m Pop about 953,500

**Port Phillip** See Melbourne

**Port Pirie**, a port of South Australia, 169 m by rail N of Adelaide, on German Bay, with a depth of 15 ft. at low water at entrance at ordinary spring tides, and of from 20 to 28 ft. alongside quays, imports general goods, and

exports wheat, and iron ore. Regular communication from Liverpool. Pop. of town and district, 11,000.

**Port Said.** a port of Egypt, at the Mediterranean entrance of the Suez Canal; important coaling station and with a large transit trade; vessels up to 27 ft. can enter harbour. Regular communication from London, Liverpool, Southampton, and Hull. Distance from London, 3360; Liverpool, 3280; Cardiff, 3175; Glasgow, 3400; Gibraltar, 1930; Malta, 950. Letters, 5 days; parcels, and Brindisi, 8 days; and Gibraltar, 14 days. British consul. Pop. estimated at 55,000.

**Portsmouth,** the chief naval station of Great Britain, on Portsmouth Harbour, on Portsea Island, England, 23 m. by rail S.E. of Southampton, and 75 S.W. of London; strongly fortified; depth of water, 17½ ft. at neaps and 30 at springs. Pop. 189,160.

**Portsmouth,** a port of New Hampshire, United States, on the Piscataqua River 3 m. up and 57 m. by rail N.N.E. of Boston; naval station with depth at entrance of over 50 ft. at low water of ordinary spring tides, depth at quays from 20 to 24 ft. at low water; imports salt, coal, and general goods; exports lumber, apples, and agricultural produce; manufactures of cottons, and boots and shoes. Pop. 11,000.

**Portsmouth,** a town of Ohio, United States, on the Ohio River, 115 m. by river, and 106 by rail E.S.E. of Cincinnati; iron founding, and manufactures of machinery and iron ware, and export of mineral products of Ohio and Kentucky. Pop. 18,000.

**Port Sunlight,** a small manufacturing town of Cheshire, England, on the W. side of the Mersey, 3 m. S. of Birkenhead (Bebington Station), with large soap-works; model village entirely inhabited by those employed at works. Pop. 2500.

**Port Talbot.** See Aberavon.

**Portugal.**—*Surface and Size.*—Portugal is a kingdom in the extreme S.W. of Europe, in the S.W. corner of the Iberian Peninsula—"The Peninsula" lying between 36° 59' and 43° 8' N., and between 6° 15' and 9° 25' W., and bounded N. and E. by Spain, and S. and W. by the Atlantic. It has a length of 348 m., a width of from 70 to 138, a coast-line of 550 m., and an area of 34,528, to which for the complete kingdom there falls to be added the Azores, and Madeira, with 1510 m. The coast is mostly low and flat (except N. of Lisbon, and in the S.), and there is flat ground along the rivers, along the coast between Oporto and the mountains N. of Lisbon, and to the N.E., E., and S.E. of Lisbon, but elsewhere the surface is mountainous (the Sierras of Spain being continued westward in Portugal), reaching heights of from 3000 to 6535 ft. The drainage is carried off by the lower parts of the Spanish rivers

and their tributaries—the Minho, the Douro, the Tagus, and the Guadiana (the first forms the boundary for a short distance at the mouth, and the last for a space below Badajoz, and at the mouth); but the Zafra flowing to the Tagus estuary, the Mondego midway between the Douro and the Tagus, and a number of other minor streams flowing direct to the sea are purely Portuguese rivers. The climate varies with position, but the sea winds prevent the dry heat so oppressive in Spain, and the mean annual temperature in the N. may be taken at 59° Fahr., while in the S. it is 4° more. On the plateaux of the interior the summer maximum is at times 110°. During the winter months (October to March) the higher hills in the N. are covered by snow; and there is often a heavy rainfall, especially in the coast districts; while there is rain in greater quantity in the N., and to a less extent in the S. all the year round. In the northern third of the country the annual amount is from 80 to 45 in., and in the southern two-thirds from 25 to 20, greater in both cases along the coast, as the prevailing winds are from the N.W., W., and S.W., and these bring moisture from the Atlantic.

*Government, &c.*—The government is a constitutional monarchy, with a legislative body called the Cortes Gerais or General Cortes, and consisting of a House of Peers, and a Chamber of Deputies or House of Commons. Portugal possesses foreign dominions at Goa, Macao, part of Timor, the Cape Verde Islands and, in E. and W. Africa, Portuguese Guinea (Senegambia), the islands of St. Thomé and Príncipe, Angola, and Portuguese East Africa (Mozambique). The population is 5,489,000, of whom a little more than half are workers; and of these some 58 per cent. are engaged in agriculture, over 17 in industries, and about 6 in commerce and transport. There are some 1500 m. of railway, of which over one-third belongs to the state. The rivers are navigable for short distances from the mouth, but the greatest length of navigable water (Douro and Tagus) is only about 50 m.

*Productions and Resources.*—The whole country is rich in minerals—copper, and copper and iron pyrites (with sulphur, gold, silver, nickel, and cobalt), iron-manganese, tin, lead and silver, lead, coal and lignite, marble, gypsum, limestone, china-clay, and salt; but dearth of fuel and high cost of transport very largely prevent the working; pyrites and salt are perhaps of most importance, making up 75 per cent. of a total mineral output of nearly £500,000. Of the total area some 45 per cent. is waste, and of this it is estimated that from 5,000,000 to 8,000,000 acres could be cultivated. About 3 per cent. of the surface is under forest, mainly in the S. where herds of swine are fed on the acorns; the cork trees, of the same part, are also important; 25 per cent. are under

pasture, cattle being reared all over the N., and sheep and goats among the mountains. Over 15 per cent produce crops of various kinds, maize in the N. and centre, wheat in the centre and S, rye and barley in the N, on low swamps a little rice, large quantities of onions, tomatoes, locust beans (in S), and some flax. On some 5 per cent under orchards there are large crops of oranges, lemons, chestnuts, and almonds, and in the extreme S of figs, bananas, and dates. The great vegetable wealth of the country lies, however, in the  $\frac{1}{2}$  per cent of surface equally divided between the vine and the olive, large quantities of valuable port and other wines being obtained from the former, and the latter and its oils furnishing staple articles of food for the people, and of export to Brazil and to the Portuguese colonies, though the primitive processes of curing the fruit and of preparing and refining the oil prevent these from being marketable in Europe. The total wine produce is some 85,000,000 gallons. There are also valuable sardine and tunny fisheries. Of the industries the most important are the spinning and weaving of woollens and cottons (the latter especially of great importance round Oporto and other places in the N), tanning, cork-cutting, the making of preserves, and the manufacture of glass, earthenware, paper, lace, gold and silver filigree, &c.

*Trade*—The imports (total value over £12,000,000) are mainly coal, wheat, and raw cotton (all over £1,000,000), cottons and cotton yarn, codfish, iron, and sugar (all between £700,000 and £500,000), wool, woollens and woollen yarn, leather and hides, and cattle. Nearly half are raw materials, and over a quarter food substances, while of a total export of over £7,300,000 more than one-half is the value of food substances, and over one-fifth that of raw materials. The great article of export is wine, valued at nearly one-third of the total, after which in order come cork, cottons, sardines, copper ore, olive-oil, cattle (all between £600,000 and £100,000), eggs, carobs, grapes, pine-apples, horses, tunny fish, figs, apples, and onions—all between £100,000 and £10,000. Of the imports 27 per cent. are sent by the British Empire, 15 by British colonies, 13 by Germany, 10 by the United States, 9 by Spain, and 8 by France; while of the exports 28 per cent. are sent to Great Britain, 13 to Spain,  $12\frac{1}{2}$  to Portuguese colonies,  $11\frac{1}{2}$  to Germany, and 11 to Brazil. The mercantile marine of Portugal has a tonnage of 103,431, and the clearances in the foreign trade are over 11,200,000 tons, and in the coasting trade over 1,700,000 tons. Of the foreign trade Britain has over a half. Of the goods of all kinds received by Great Britain from Portugal (total value some £3,200,000) the leading lines are wine—over one-third of the whole—cork, cocoa, fish, pit-props, caoutchouc, copper (ore, regulus, and precipitate), locust beans, and

fruit (apples, grapes, oranges, &c.)—all between £500,000 and £100,000—and wool, potatoes, onions, pyrites (iron and copper), raw hides, and eggs. The exports of British and Irish produce to Portugal are valued at some £2,200,000, the leading articles being coal, cottons, iron, and machinery and mill work (all between £500,000 and £100,000), woollens and worsteds and yarn, jute yarn, unwrought tin, sulphate of copper and other chemicals, copper, manure, linen yarn, hardware, and painters' colours and materials, in addition to which there are re-exports of foreign and colonial goods (largely raw cotton, rice, oil-nuts, and tea) valued at about £400,000, and direct imports from, and exports to, Portuguese possessions valued at some £250,000 and £2,100,000 respectively. British trade would best benefit by direct representation of houses, by active commercial travellers, and by local advertising. Small orders should never be overlooked, they may lead to others. Ironmongery, glass, china, india-rubber goods, and many articles of the miscellaneous manufactures class could be supplied just as well and cheaply by the United Kingdom as by any other country.

There are, in Portugal proper, British consuls at Lisbon and Oporto; and vice-consuls at a number of the more important towns. Mails from and to London daily, letters,  $2\frac{1}{2}$ d per half-oz, postcards, 1d, parcels, under 3 lbs, 1s 6d, between 3 and 7, 2s, between 7 and 11, 2s 6d, money orders to and from, telegrams,  $3\frac{1}{2}$ d a word.

*Money, &c*—The standard is gold, and the unit of account is the milreis=1000 reis=4s 5d, or 4500 reis=£1, conto=1000 milreis, 100 reis=a testoon. The exchange value of the milreis is, however, at present only about 3s 6d. The metric system of weights and measures is current, but the old libra=1 012 lb avoirdupois, the Lisbon almude=3 7 gallon, the Oporto almude=5 6 gallon, the alqueire=0 36 bushel, and the moio=2 78 quarters, are still in use. The Portuguese flag is half white and half blue (the latter next the staff) with across the intersection a white bordered red shield, surmounted by a crown and bearing a central shield with a conventional flower, and having three towers above and two down each side. The royal standard has the same bearings, but the whole field is red.

Posen, a province of Prussia with a chief town of the same name in the North German Plain, but with one or two points rising to a height of over 600 ft; drained by the navigable Warthe and smaller streams, timber, beet-root, and sheep-rearing; manufactures of sugar, paper, machinery, &c. The town, on the Warthe, 158 m by rail E of Berlin, manufactures agricultural implements, furniture, and artificial manures, and has a large trade in agricultural produce both by railway and by water. Area

of province, 11,184 m Pop 1,887,500, pop of town, 117,100

Poti, a port of Trans-Caucasia, Russia, on the E coast of the Black Sea, 200 m by rail W of Tiflis, depth at entrance of harbour 26 ft, and from 17 to 22 ft at quays, larger vessels anchor in 10 fathoms about a mile off shore. There are practically no imports from foreign countries, exports to the value of over £500,000 are mostly manganese ore and maize. Considerable coasting trade. Of 300,000 tons entered and cleared, over two-thirds are British. Regular communication from London. British vice-consul. Pop 6000

Potomac, a river of the United States, rising in the Alleghany Mountains and with a course of 500 m from its source in West Virginia to Chesapeake Bay. The estuary is about 100 m long, and from 2 to 10 wide. The largest vessels can sail up for 110 m to Washington, at which point the course is interrupted by falls nearly 40 ft. in height, round which, and the rapids above and below them, smaller vessels pass by means of canals. Area of basin, 16,000 m

Potosi, a province of Bolivia, with a chief town of the same name, lofty plateau with minerals and rearing of cattle. The town, 50 m S W of Chuquisaca, is of considerable commercial importance as a centre of distribution, and is famous for the silver mines in the neighbourhood, which have been worked for centuries, and which, though not now so productive as formerly, still turn out large quantities of ore. Area of province, 52,100 m Pop 365,500, pop of town, 16,000

Potsdam, the chief town of Brandenburg, Prussia, on an island in the River Havel, 18 m by rail S W of Berlin, with manufactures of sugar, chemicals, textiles, tobacco, &c, and a considerable trade in flowers of different kinds, especially violets. Pop 60,000

Pottstown, a town of Pennsylvania, United States, on the Schuylkill River, 40 m by rail N W of Philadelphia, iron smelting, and manufactures of iron and steel goods, &c. Pop 14,000

Pottsville, a town of Pennsylvania, United States, on the Schuylkill River, 95 m by rail N W of Philadelphia, with iron, and anthracite coal in neighbourhood, iron smelting and manufactures of iron and steel goods, &c. Pop 16,000

Poughkeepsie, a town of New York, United States, on the Hudson River, 70 m by rail N of New York City, with manufactures of carpets and other woollens, boots and shoes, iron and iron ware, &c. Pop 24,000

Pozzuoli, a city of S Italy, on the Bay of Naples, with steel, shipbuilding, and other works established by Armstrong, Whitworth, & Co in 1889 as a branch establishment for the supply of vessels, armour-plate, guns, marine-engines, &c, to the Italian Government. Pop 15,000

Prague, or Prag, the chief town of Bohemia, Austria-Hungary, on the navigable Moldau, by

which *via* the Elbe there is regular communication with Hamburg, 217 m by rail N N W of Vienna, important transit trade and centre of distribution, with manufactures of machinery, chemicals, linens, cottons, gloves, &c. Letters, 1½ day; parcels, 4 days. British consul. Pop 202,000

Prato, a town of Italy, 11 m by rail N W of Florence, with manufactures of textiles, paper, straw-plait, wine-flasks, &c. Pop 16,000

Prenzlau, a town of Brandenburg, Prussia, 68 m by rail N N E of Berlin, with manufactures of woollen yarn. Pop 20,500

Prescot, a town of Lancashire, England, 3 m by rail W S W of St Helens, with coal in neighbourhood, watchmaking, and the manufacture of files and watchmakers' tools. Pop 7856

Pressburg, a town of Austria-Hungary, on the N bank of the Danube, 40 m by rail E of Vienna, with an important river trade in grain, cattle, sheep, pigs, and Hungarian wine. Pop 66,000

Preston, a town of Lancashire, England, on the navigable Ribble 16 m up, 29 m N N E of Liverpool, and 30 N W of Manchester; depth on bar at low water of ordinary spring tides 5 ft, at high water of springs 21 ft, and at high water of neaps 13½ ft, tidal basin has a depth of 23½ ft on the entrance sill at high water of neaps, and 29½ ft at high water of springs, great centre of cotton spinning and weaving, with shipbuilding, machinery, boiler works, &c. Pop 112,982

Prestwich, a town of Lancashire, England, 4 m N N W of Manchester, with large manufactures of cotton. Pop 12,839

Pretoria, a town of the Transvaal Colony, South Africa, 46 m by rail from Johannesburg, 349 m from Delagoa Bay, 530 from Bulawayo, 1040 from Cape Town, 740 from Port Elizabeth, and 511 from Durban, railway and distribution centre, in the midst of a rich mining and agricultural district. Pop 12,000

Preveza, or Previsa, a town of Turkey-in-Europe, at the entrance of the Gulf of Arta, imports of provisions and general goods, and exports of cheese, wool, and olive-oil. Money orders to and from British vice-consul. Pop 5000.

Pribilof, or Pribylov, Islands, a small group of four islands of Alaska, United States, in Behring Sea, important as the summer breeding place of fur seals.

Pribram, a town of Bohemia, Austria-Hungary, 45 m S S W of Prague, with very important silver-lead mines. Pop 14,000

Prieska, a village of Cape Colony, South Africa, on the Orange River, 107 m N W of De Aar, with large deposits of potassic nitrate and beds of asbestos. Pop 500.

Prince Edward Island, a province of the Dominion of Canada, on the Gulf of St Lawrence, to the N of New Brunswick and Nova Scotia, from which it is separated by Northum-

berland Strait, which is from 9 to 30 m. wide. The island has an extreme length of about 140 m, and a width of from 5 to 31, surface undulating, but nowhere rising to a height of over 500 ft. The winter is long, but the cold less intense than in the mainland provinces. The soil, a rich loam, is remarkably fertile, and of the whole area of 1,398,000 acres, 85½ per cent are under cultivation. The farms number over 14,000, of which 33 per cent are between 50 and 100 acres, 27 per cent. between 10 and 50 acres, and 21½ per cent. between 100 and 200 acres. The crops of apples, cherries, and plums are considerable. The ordinary farm crops are heavy, and dairy farming has since 1891 made very considerable progress. There are 34,000 horses, 112,000 cattle, 126,000 sheep, 48,000 pigs, and a large number of fowls, kept, and the leading industries, apart from tillage and dairy-farming, are tanning, saw-mills, woollen mills, starch and soap works, canning and preserving of meat, fish, and lobsters, carriage making, &c. The island is the best fishing station in the Gulf of St. Lawrence, and the catch of lobsters, herring, cod, hake, and oysters, might be very largely increased. The government is, in the meantime, re-stocking many of the old oyster beds and laying down new ones. There are about 200 m. of railway on the island, and there is daily communication with the mainland by steamers which give connection with the leading lines of the Dominion of Canada and of the United States. Pop 103,500

**Progreso**, a port of Mexico, on the N. coast of Yucatan, with an open roadstead in which vessels have to anchor some 5 m. off shore, and which is, between September and March, very much exposed to northerly gales, terminus of two short railways, and has now a very large export of henequen or sisal hemp, besides a little trade in hides and hair. Regular communication from Liverpool, distance, 4610 m., distance from Vera Cruz, 400 m. British vice-consul. Pop 30,000

**Prome**, a town of Burma, on the E. bank of the Irawadi, 160 m. by rail N N W of Rangoon, with a trade in rice, cotton, and sugar, and weaving of silk. Pop 27,500

**Prossnitz**, a town of Moravia, Austria-Hungary, 12 m. by rail S S W of Olmutz, with a great trade in grain, and manufactures of textiles. Pop 24,000

**Providence**, a port of Rhode Island, United States, on Providence Harbour (an inlet of Narragansett Bay), 35 m. from the sea, and 44 by rail S W of Boston, manufactures of gold and silver ware, locomotives and machinery, woollen and worsted goods, cottons, cotton and mohair laces, cotton wicks, cotton braid, and cotton thread, print and bleach works. British vice-consul. Pop 176,000

**Prussia**, a kingdom of central Europe form-

ing the northern part of the German Empire, of which it has 64 per cent of the area, 66 of the arable land, 60 of the forests, 14 of the vineyards, and over 60 of the population. The physical features, drainage, and climate have already been described in dealing with Germany. The area is 134,603 m. The government is a hereditary monarchy with legislative power vested in the King and a Landtag, the latter composed of an Upper House and a Chamber of Deputies. The Chamber has the power of dealing with estimates and finance, their decisions with respect to which the Upper House has only the power of accepting or rejecting. The Landtag must be convoked by the King every November, and at other times if there be necessity. The population is 34,473,000, of whom over 38 per cent are connected with industries and mining, and 35 with agriculture, cattle rearing, &c.

The communications, trade, consuls, postage rates, money, weights and measures, and flag are those of Germany, and the productions and resources of the country, and its manufactures are dealt with in connection with the various provinces—East Prussia, West Prussia, Brandenburg, Pomerania, Posen, Silesia, Saxony, Schleswig-Holstein, Hanover, Westphalia, Hesse-Nassau, the Rhine Province, and Hohenzollern—but a few general details may be here repeated so as to present the leading features all together.

The mineral wealth is great. Coal and iron are found in greater abundance than in any other country of Europe except Great Britain, and they are found together, the chief districts being Westphalia, the Rhine Province (Ruhr), along the Saar, and in Silesia, while lignite is worked in Brandenburg, Prussian Saxony, and the Rhine Province. Of zinc the output is not only greater than that of any other country, but over one-third of all that is produced—Silesia, the Rhine Province, and the Hartz. Associated with it is lead, and this is found also in Nassau. Copper is got in the Hartz, Westphalia, and Prussian Saxony, and gold, silver, nickel, sulphur, arsenic, cinnabar, &c. are also found, as well as great quantities of salt (rock salt and potash salts at Stassfurt and elsewhere), china-clay, amber (on the Baltic coast), &c. The crops and animals reared for food are much as elsewhere in northern Europe, and large numbers of merino and other sheep are, besides, reared for wool (mainly in Brandenburg, Silesia, Pomerania, and Saxony), and horses for sale in the N. and E., the vine is grown in Nassau and the Rhine Province, along the valleys of the Rhine and Moselle—output of hock and other wines over 4,000,000 gallons a year, tobacco in Brandenburg, Prussian Saxony, and Silesia, oil-seed plants in Pomerania, Brandenburg, and Silesia, hops in Posen and Prussian Saxony, and beet-root in Prussian

Saxony and Silesia—output of over 1,200,000 tons of sugar every year, and some 240,000 tons of molasses; potatoes in Silesia, Brandenburg, and Posen—largely used for distilling, hemp and flax in N W and S E Of the whole area 23·7 per cent are forest, the most thickly wooded districts being Hesse-Nassau, Hohenzollern, and Brandenburg, after which come the Rhine Province, Westphalia, and Silesia More than two-thirds of the woodland is under conifers—Scots fir (half of the total area for the whole country), spruce, larch, and silver fir—and in the remaining third the chief trees are beech, oak, birch, alder, aspen, and osiers

The manufactures include all kinds of iron and steel goods, from the cheapest and most “gum-crack” articles of common hardware and metal toys to excellent rails, machinery, cutlery, &c., at the other end of the scale—the Rhine Province, Westphalia, Saxony, Silesia, Brandenburg, &c., cotton spinning and weaving on a very large scale are carried on, along with the cognate branches of dyeing and printing, in the Rhine Province, Silesia, and Westphalia, while the Rhine Province, Silesia, Brandenburg, and Prussian Saxony have spinning and weaving of wool, and Silesia, the Rhine Province, Westphalia, and East Prussia, Prussian Saxony, and Hanover, of linen The silk manufacture—mainly in the Rhine Province, to a less extent in Brandenburg and Westphalia—is very important, and a considerable amount of half-silk fabrics are made in the Rhine Province. Of less moment, but still of large value, are chemicals (Silesia, Saxony, Brandenburg, and the Rhine Province), glass, glassware, and mirrors (Silesia, Westphalia, and the Rhine Province), china, earthenware, and fire-clay (Silesia, the Rhine Province, and Hesse); paper and paper-hangings (the Rhine Province, and Brandenburg), distilling (Brandenburg, Posen, West Prussia, and Silesia); leather and leather goods, rubber-goods, musical instruments (pianos, &c.), chemical and philosophical apparatus, furniture, &c.

Prussia, East, and West, two provinces of the kingdom just described, in the extreme N E, along the Baltic E of Pomerania, surface mostly flat and low, but rising in one or two places to isolated heights of over 1000 ft., beet-root, rye, and potatoes; amber off coast of East Prussia Area of East Prussia, 14,282 m; pop 1,997,000, West Prussia, 9854 m, pop 1,564,000

Pruth, a tributary of the Danube, from the N, forming along a considerable part of its course the boundary between Russia and Roumania, with a length of about 400 m, of which some 150 are navigable.

Przemysl, a town of Galicia, Austria-Hungary, 60 m. by rail W. of Lemberg, with manufactures of machinery, linen, &c. Pop 46,500

Puebla, or Puebla de Los Angeles, a city of

Mexico in a state of the same name, 115 m. by rail, or 67 m in a direct line, S E of the City of Mexico; with manufactures of cotton goods, paper, iron, pottery, &c., the neighbourhood being rich in china-clay; both gold and iron worked in neighbourhood; important railway centre, and centre of distribution Area of state, 12,204 m Pop 1,024,500; pop of town, 89,000

Pueblo, a town of Colorado, United States, on the Arkansas River, 130 m S by E of Denver, with blast-furnaces, steel works, and iron and steel manufactures, &c Pop 28,500

Puerto Cabello, a port of Venezuela, 80 m by rail W. of Caracas and 70 by sea from La Guaira, with a good roadstead with anchorage in 8 to 17 fathoms, depth at entrance and alongside the quay 19 ft; imports general goods and exports coffee, cacao, mahogany, cedar, hides, skins, copra, cinchona, dividivi and dye-woods. Regular communication from London and Liverpool. Distance from Liverpool, 3200 m, New York, 1850 British vice-consul. Pop 18,000

Puerto de Santa Maria, a port of S W. Spain, on the Bay of Cadiz, 5 m N E of Cadiz across the Bay, but 22 m. round by railway, with large export of sherry Pop 24,000

Puerto Plata, a seaport on the N. coast of Dominica, about 100 m N W of the town of San Domingo, vessels of large size anchor in about 5 fathoms, depth at entrance, 6 to 7 fathoms. Imports general goods, exports mahogany, log-wood, lignum vitæ, tobacco, sugar, coffee, cocoa, dividivi, and turtle-shell British vice-consul. Pop 5000

Puerto Principe, a province with a chief town of the same name, in Cuba, deposits of iron ore in the N The town 160 m W N W. of Santiago is a distribution centre, with manufactures of cigars Area of province, 7429 m Pop 88,500, pop of town, 25,500

Puget Sound, an inlet in Washington, United States, southward from the Juan de Fuca Strait, with a length of about 80 m., and a coast-line of some 1600 m, navigable over its whole length, and affording important opportunities of export for the products of the state—lumber, &c.

Pungwe, a river of Portuguese East Africa, entering the sea about 130 m S W. of the Zambesi and affording an important route to British Central Africa. See Beira.

Punjaub, a province of the N W corner of India, sloping from the N, which is occupied by the foot hills of the Himalayas, and from the Salt Range Mountains on the S (5000 ft.), to the great plain of the Indus and its five great tributaries (the Jehlam, the Chenab, the Ravi, the Beas, and the Sutlej) Climate exceptionally hot, and, except in the Himalayas, very dry, cultivation being rendered possible largely by means of irrigation, for which, however, the rivers supply ample means Nearly

10,000,000 acres are thus rendered useful. Produces and exports grain, indigo, salt, spices, tea and tobacco, and has also manufactures of cottons, iron, leather, gold and silver lace, silk, shawls, &c., imports dyes, wool, silk, furs, and general goods. Area, 133,711 m., of which 97,209 belong to British India proper and the rest to protected native states. Pop 24,755,000 (British India, 20,330,500)

**Punta Arenas**, a port of call on the W. side of the N and S portion of the Strait of Magellan, Chile, with coal in neighbourhood, centre of distribution for the whole of the extreme S of South America; anchorage in 6 to 12 fathoms, less than a mile off shore, coaling station; imports general goods; and exports wool, alluvial gold, hides, skins, and ostrich feathers. Regular communication from Liverpool. British vice-consul. Pop 5500

**Punta Arenas**, or **Puntarenas**, a port on the Pacific coast of Costa Rica, on the Gulf of Nicoya, open roadstead with anchorage about 2 m off shore, imports tinned goods, exports coffee, india-rubber, hides, wool, cedar, dye-woods, and tortoise-shell. British vice-consul. Pop 5000.

**Purbeck, Isle of**, a peninsula of Dorsetshire, England, 12 m long and 5 to 9 broad, between Poole Harbour and the English Channel, with many quarries of excellent building stone akin to the well-known Portland stone.

**Purus**, a great river of South America, rising in the N of Bolivia and flowing north-eastward to the Amazon, about 90 m above Manaos. In the flood season steamers can get far up, but during the rest of the year navigation is impossible beyond the centre part of the river. India-rubber forests along the banks.

**Puteaux**, a town of the department of Seine, France, on the Seine, 3 m W of Paris, with dyeing and print works, and manufactures of dyes and other chemicals. Pop 24,500

**Puy, Le**, a town of the department of Haute-

Loire, France, 40 m. S W of St Étienne, manufactures thread and guipure lace. Pop 21,000

**Puy-de-Dôme**, a department of centre France; large deposits of coal, and silver-lead is also mined. Area, 3070. Pop 544,500.

**Pyrenees**, a great mountain chain stretching from the SE corner of the Bay of Biscay, eastward to the Mediterranean, along the borders of France and Spain, with a total length of some 280 m, and a width of from 20 to 80 m. The western part has a height of from 3000 to 1000 ft., in the centre the highest points range from 9500 to 11,168 ft., and the eastern portion has an elevation of from 9500 to about 2000 ft at the extreme eastern end. The snow-line is a little over 9200 ft on the S side, and a little over 8000 ft on the N. Railways pass along the coast at either end, on the W from Bayonne to San Sebastian, and on the E by means of a tunnel from Perpignan to Figueras. Elsewhere communication between the two countries is almost entirely by difficult mountain tracks, except along the carriage road crossing from Oloron to Saragossa by a pass over 5300 ft. high, along two other passes nearer the W end of the range, and along the Col de la Perche which connects the head waters of the Tet in France with those of the Segre in Spain.

**Pyrenées, Basses-**, a department of S W France, extending inland from the Bay of Biscay, along the S. side of the Pyrenees; vines and chestnuts, rearing of cattle, sheep, and pigs. Area, 2943 m. Pop 426,500

**Pyrenées, Hautes-**, a department of France, lying immediately to the E of that just described, with the same products. Area, 1749 m. Pop 216,000

**Pyrenées-Orientales**, a department of S W France, extending from the Mediterranean inland along the N side of the Pyrenees, large deposits of iron ore, vines, mulberries, chestnuts, olives, excellent red and white wines. Area, 1592 m. Pop 212,500

## Q

**Quarnero, Gulf of**, an opening near the N end of the Adriatic Sea, between the Peninsula of Istria and the coast of Dalmatia, with a length of about 43 m, and a width across the entrance of over 45. It is much occupied by islands, of which the largest are Voglia and Cherso, the latter, at the N end, approaches within 3 m. of the peninsula, and the name of the Gulf of Quarnero is sometimes confined to the portion of the sea to the S of this, while the part to the N is called the Gulf of Friume. In this confined sense the Gulf has a length of about 30 m, and an extreme width of about 20. The portion of the sea to the SE of Cherso is known as the Gulf of Quarnerolo. Stormy, but with good fishing all round the coast.

**Quebec**, an eastern province of the Dominion

of Canada, lying along both sides of the St Lawrence River and the Gulf of St Lawrence, and with the Labrador Peninsula to the N, the Labrador coast district and Newfoundland to the E, New Brunswick and the United States to the S, and the province of Ontario to the W. The province includes also the Island of Anticosti, and the Magdalen Islands in the Gulf of St Lawrence. There is a coast-line of over 800 m along the Gulf of St Lawrence, and a small coast-line in the N W, along James Bay, opening off the S of Hudson Bay. Surface undulating, reaching to the N of the St Lawrence an extreme height of about 1600 ft, and to the S of the St Lawrence to an extreme height of nearly 4000 ft, drained mainly by the St. Lawrence and its tribu-

taries, of which the chief are the Ottawa, the St Maurice, the Saguenay, the Richelieu, and the Chaudière, many lakes. The climate is mild and pleasant in summer, and although the cold of winter (December to April) is severe, the air is generally dry and the sky bright, so that the season is not an unpleasant one. The ground is covered with deep snow which becomes hard under foot, and traffic is carried on by means of sleighs. Frost and snow are also of great benefit for agriculture, as they leave the ground in a favourable state for rapid vegetable growth. The soil is exceedingly good, and the ordinary crops heavy and of good quality, while many districts are particularly suitable for growing apples and plums, the former are exported in large quantities, and some of the varieties are very famous for their excellent quality. Small fruits are abundant everywhere, and in the southern and western parts of the province grapes and tomatoes ripen readily in the open air. To the N of the St Lawrence, and in the Eastern Townships, a district lying along the United States frontier for a distance of about 200 m and with an average width of 40 m, there is excellent pasture, which is utilised for the rearing of large herds of cattle, and here and elsewhere there is now a very large amount of dairy-farming. Cattle are exported in great numbers to the United Kingdom and elsewhere, and there are over 200 creameries and more than 1300 cheese and butter factories. There are important and valuable fisheries all along the coast, and the fishing industry has attained large proportions, the products being exported not only to the inland provinces of the Dominion but also abroad. The forests are also extensive and of great value, yielding pine, ash, birch, elm, beech, walnut, maple, and many other varieties of timber. The most important minerals are gold (Beauce district), copper (Eastern Townships), lead, silver, platinum, zinc, asbestos, apatite (or phosphate of lime—along the Ottawa), mica (Ottawa, Pontiac, and Saguenay), and serpentine (Eastern Townships). There are manufactures of cloth, linens, furniture, leather, sawn timber, wooden goods, flax, iron and hardware, wood-pulp, paper, chemicals, soap, boots and shoes, cotton and woollen goods, cheese, butter, and all kinds of agricultural implements. There is good communication by navigable rivers (St Lawrence, Ottawa, Richelieu, and St Maurice, the Richelieu giving communication with the Hudson and so with New York), canals, nearly 4000 m. of railway, and a large number of properly made roads. Area, 344,450 m. Pop 1,649,000.

Quebec, the chief town of the province just described, on the N bank of the River St Lawrence, about 900 m up from the Strait of Belle Isle, and 172 m by rail, or 180 by river, below Montreal, excellent harbour taking largest vessels alongside quays, imports

general goods of all kinds, exports lumber, sawn timber, grain, cheese, &c; great railway centre, important lumber trade, and manufactures of woollens, ironware, machinery, leather, boots and shoes, and paper. Letters, 9 days, parcels, 11. Regular communication from London, Liverpool, and Manchester. Distance from London, 2900 m, Liverpool, 2635, Glasgow, 2565, Cardiff, 2750, Belfast, 2525. Time for noon at Greenwich, 7 15 A M. Pop 69,000.

Quedlinburg, a town of the Saxony province of Prussia, 56 m by rail S E of Brunswick, with manufactures of iron and brass ware, sugar, &c. Pop 23,500.

Queenborough, a small port of Kent, England, 2 m S of Sheerness, with a line of steamers run in connection with the London, Chatham, and Dover Railway, and giving regular daily connection with Flushing and Holland, harbour has a depth of from 15 to 30 ft at low water of ordinary spring tides, considerable timber trade. Pop 1546.

Queen Charlotte Islands, a group in British North America, to the N of Vancouver Island, the two largest (Graham and Moresby) having a length of about 160 m, an extreme breadth of about 65, and a height of about 4000 ft, extensive forests, and important deposits of coal, copper, iron, and gold. Area about 5000 m.

Queen's County, an inland county of Leinster, Ireland, dairy-farming, and a little coal worked in the S E. Area, 424,723 acres, of which less than one-third is under cultivation. Pop 57,417.

Queensland, the north-eastern state of the Commonwealth of Australia, lying between 10° and 29° S, and between 138° and 153° 30' E, and bounded N by the Gulf of Carpentaria and Torres Strait, NNE by the South Pacific, S by New South Wales, and W by South Australia, the boundary with New South Wales is mainly the line of 29° S, and with South Australia the meridian of 138° E from the Gulf of Carpentaria S to the line of 26° S, and then along 141° E to 29° S. Cape York Peninsula is a long narrow point standing out to the N between the Gulf of Carpentaria and the Coral Sea. The extreme length from N to S is about 1300 m, the greatest breadth about 800, the coast-line 2250, and the area 668,224, of which 2240 are in the islands. As the products of the northern and southern parts are very different, and the settlers have interests widely apart, it has been more than once proposed to divide Queensland into two states, the division being made along the parallel of 21° S. The surface is marked by the Great Dividing Ranges, continued northward roughly parallel to the E coast, becoming lower towards the N, and spreading out westward into plateaux, very much as in New South Wales. The average

elevation is over 2000 ft, with the highest points reaching from 1000 to 5100 ft, and a considerable amount of the plateau is over 1000 ft. The hill country falls, in most places rapidly, to a coastal strip 50 m in width or less, and more gently north-westward to the wider coast district round the Gulf of Carpentaria, and westward and south-westward to the central plain and the basin of the Darling. The E side has eucalyptus forest, the plateau and the general slope are open down with very rich grazing for cattle and sheep. The drainage is carried off in four different directions: northward to the Gulf of Carpentaria go the Mitchell, Gilbert, Norman, Flinders, Leichhardt, and Albert Rivers, eastward to the Pacific the Burdekin, Fitzroy, Burnett, Mary, and Brisbane, and smaller streams. None of these are navigable except for short distances near the mouth, and the eastern streams, during the summer months, come down in roiling flood carrying in their swollen waters great quantities of sediment—the violent current and the mud doing mischief to crops in the same way as with the coast rivers of New South Wales. In the S. the Condamine or Balonne, the Warrego, and the Bulloo flow to the Darling basin, and on the W. the Georgina, the Diamantina, and the Barcoo and Thomson River flow to the inland drainage basin of Lake Eyre. It was long ago also pointed out that the river flow was very far below what might be expected from the rainfall, and borings revealed the existence of an immense area with store of underground water. The daily supply from the bores already sunk (depths from 500 to 5000 ft) by the Government, or at private expense, is estimated at some 300,000,000 gallons, and it is probable that the whole of the western portion of the state, where water is scarcest, will by-and-by be provided with a supply from artesian wells. The climate varies, of course, with latitude and height, the N being tropical and sub-tropical, while in the S the mean temperature is about 67° Fahr, and the range from 35° to over 100°. The only really trying times are from November to March when the heat is sometimes intense, though the dryness makes it more bearable, and during the rainy season from December to March, when the damp warmth is even more difficult to endure. The rainfall is greatest along the coast (between 50 and 60 in.), and diminishes gradually towards the S.W., the whole district in the W.S.W. having less than 10 in. The state government is on the same lines as that of New South Wales, and the electors require certain qualifications of property or income. The population is 503,500, exclusive of natives but inclusive of over 9000 Polynesians, about the same number of Chinese, and some 5000 persons of the Asiatic races. The Chinese are

mostly at the gold-mines; the Polynesians, &c., at the sugar plantations. The railways, which have a total length of over 2800 m., all belonging to the state, are mostly in the E and S.E. There is communication from Brisbane southward to the New South Wales System at Wallangarra (233 m.), northward by the coast district to Gladstone (332), and inland to Cunnamulla (601), with a number of branches at different points, from Rockhampton inland for 127 m with some short branches, from Townsville inland for 368 m; and farther N. are several other lines running short distances inland. The mineral resources are most valuable, there being no fewer than twenty-five gold-fields at various points, with an annual output valued at nearly £3,000,000, the best known districts being Gympie, N. of Brisbane; Mount Morgan and Gladstone, S. of Rockhampton, Clermont, inland from Rockhampton, and Charters Towers, S. of Townsville. The output of tin and that of coal are valued each at over £170,000, and there are large deposits of copper, though it is not at present profitable to work a number of the mines, so that the production, meanwhile, is small: silver, lead, wolfram, bismuth, opals, and sapphires are also worked. About half the whole area is forest, still almost undeveloped, though there is abundance of excellent hardwood timber—of different kinds and suitable for many different purposes—ordinary building and furniture woods, ornamental furniture woods, and woods fitted for carriage building, wheel-wright work, tool handles, staves, and trees with bark giving good tanning results, or that yield medicinal and other gums and resins. The coast districts produce rich and heavy crops of the ordinary grains and British fruits and vegetables, while in the damper or more tropical regions there are maize, sugar, coffee, cotton, tobacco, rice, arrow-root palms, bananas, pine-apples, peaches, guavas, mangos, figs, melons, citrons, lemons, ginger, pepper, nutmegs, &c. There seems also to be possibilities in the growing of all the ordinary oil-seed plants. The total extent of land under cultivation is nearly 500,000 acres, of which over a quarter is under maize, somewhat less under sugar-cane, and nearly one-sixth under wheat. The great agricultural wealth of the colony lies, however, in its sheep and cattle, for the rearing of which most of the higher ground and a greater part, now indeed with underground water-supply almost the whole, of the western slope are well fitted, with abundance of grass and grazing scrub. The sheep number over 10,000,000, the cattle over 4,000,000, and the horses over 450,000, while the area of the sheep and cattle runs is over 350,000 m. The sheep include a large number of merinos. Among the industries are manufacture of sugar and sugar-products and of

tobacco, wool-scouring, making of leather, boots and shoes, spirits and cordials, flour, ice, butter, machinery, hair bedding, woollens, soap, candles, &c, meat preserving, and saw-mills Bêche-de-mer and pearl fisheries off N coast. The imports (total value over £7,000,000—of which some 43 per cent are from the United Kingdom, and about the same amount from other states of Australia) consist, to the extent of about one-fifth, of textiles and apparel, and of over one-sixth of metals and metal goods, and from the United States come agricultural implements, tools, and household articles, to the value of over £300,000 a year. The exports (total value about £10,000,000—of which nearly one-third goes to the United Kingdom, and more than half to the other Australian states) are chiefly gold (nearly one-fourth), wool (well over one-fifth), frozen meat, sugar, hides and skins, preserved and salted meat, tallow, pearl-shell, and green fruit (all between £1,000,000 and £100,000), and smaller amounts of meat-extract, silver, tin, copper, bêche-de-mer, &c. The articles received by the United Kingdom from Queensland (total value between £2,000,000 and £3,000,000) are chiefly wool (over £1,000,000), beef and mutton (fresh and preserved), tallow and stearine, gold, pearl-shell, tin, and silver, and the chief articles of British produce sent to Queensland (total value about £2,500,000) are iron (wrought or unwrought) and machinery, cottons, apparel and haberdashery, woollens and worsteds, spirits and beer, chemicals, barks, hats, glass and earthenware, oil- and floor-cloth, painters' colours and materials, paper, provisions, &c, while there is a foreign transit trade (silks, woollens, &c) of over £170,000. The tonnage entered and cleared in the foreign trade is over 1,600,000 tons, and in the coasting trade over 7,000,000. The tonnage of the mercantile marine of the colony is over 23,000 (including river steamers). Mails every week, for postage, see Australia and New South Wales.

**Queenstown**, a seaport in the county of

Cork, in the S W of Ireland, 12 m by rail and about 8 by river S E of the city of Cork, depth alongside quays 24 ft at low water, and 37 at high water, of ordinary spring tides, place of call for American steamers, mails and passengers taken on board and landed. Pop 7909.

**Queretaro**, the chief town of a state of the same name in central Mexico, on a plateau over 6000 ft above sea-level, and 152 m by rail S W of Mexico City, manufactures of cotton. The state has silver and mercury. Area of state, 3556 m. Pop 228,500, pop of town, 35,000.

**Quetta**, a town of British Baluchistan, commanding the Bolan Pass. The surrounding district, under British control, has an area of over 22,000 m.; coal and petroleum. Pop 25,000.

**Quetzaltenango**, or **Quezaltenango**, the chief town of a province of the same name in Guatemala, Central America, 80 m W S W of Guatemala city, centre of extensive coffee producing district, with a large trade in native cloth. British consul. Pop 22,500.

**Quilmane**. See Kilmane.

**Quimper**, a town of the department of Finistère, France, on the Odet, 35 m (63 m by rail) S E of Brest, fishing centre, deposits of coal and potter's clay, and manufactures of pottery, leather, paper, &c., vessels up to about 250 tons can reach the town, but anything over that size must anchor in the bay in 5 to 6 fathoms, imports coal, charcoal, salmon, salt, &c, exports pitchblende, earthenware, leather, &c. Pop 19,500.

**Quincy**, a town of Illinois, United States, on the Mississippi, 160 m up from St. Louis, and 260 by rail S W of Chicago, railway centre with large river trade and manufactures of flour, machinery, ironware, furniture, and carriages and waggons, &c, pork-packing. Pop 36,500.

**Quito**, the chief town of Ecuador, South America, 170 m N N E of Guayaquil, at an elevation of over 9300 ft. above sea-level, with manufactures of cottons and woollens, and a trade in humming birds' skins. British consul-general. Pop 40,000.

## R

**Rabat**, a port on the W coast of Morocco, at the mouth of the Bu Regreg, depth on bar varying from 7 ft at neaps to 12 at springs, but vessels anchor outside and load and discharge by means of lighters. Imports cottons, refined sugar, candles, tea, &c, exports wool, goat-skins, carpets, and beeswax. Regular communication from London. British vice-consul. Pop 40,000.

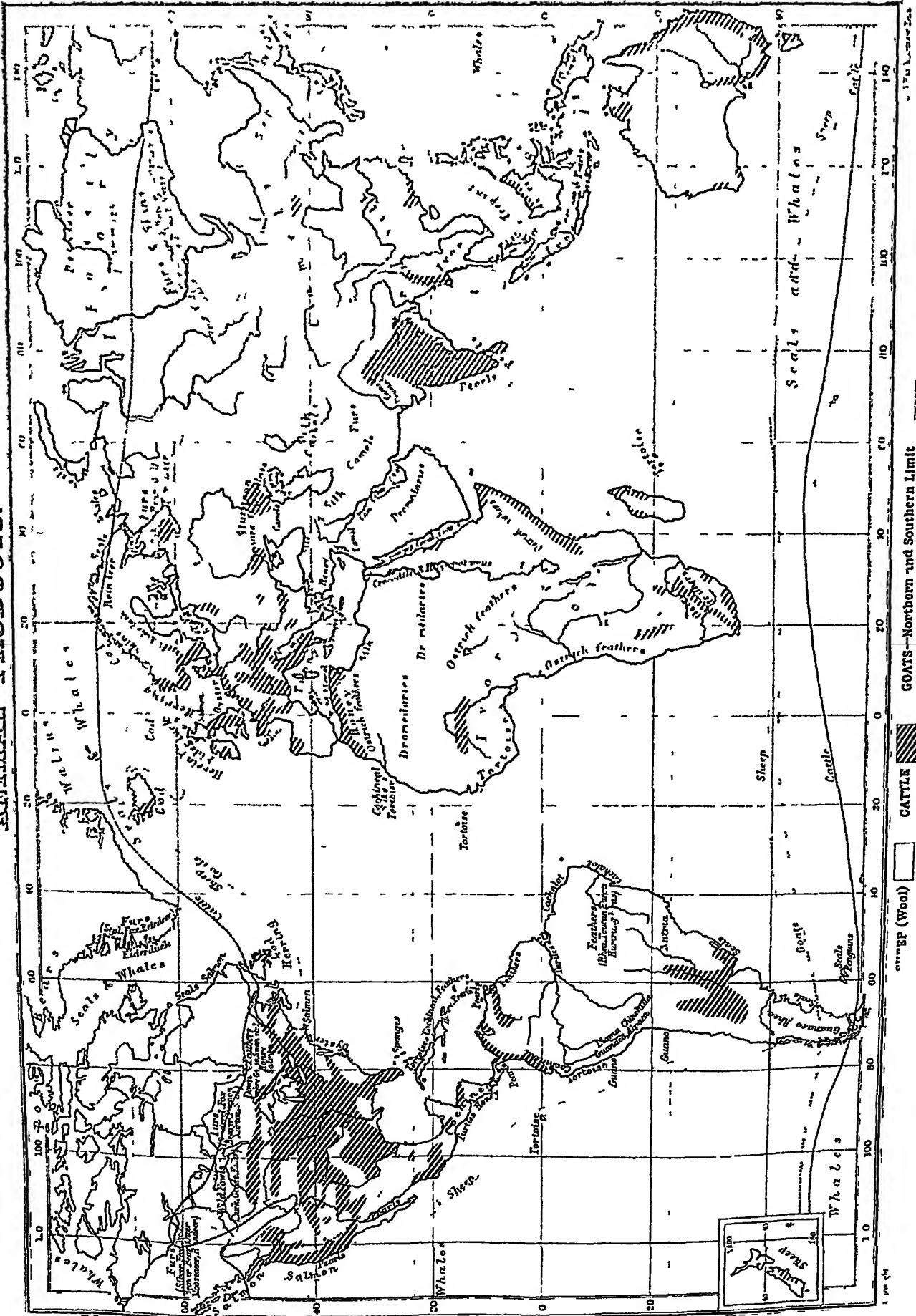
**Racine**, a town of Wisconsin, United States, on the Root River where it enters Lake Michigan, 62 m by rail N of Chicago, large trade in lumber, and manufactures of wooden goods, flour, linseed-oil, and agricultural implements. Pop 29,500.

**Radcliffe**, a town of Lancashire, England, on the Irwell, 2 m S W of Bury, with coal in neighbourhood, manufactures of cottons, bleach-works, &c. Pop 25,368.

**Radom**, a province of Russian Poland, with a chief town of the same name, drained by Vistula, making of machinery, distilling of potato spirit, and making of flour, sugar, and leather. The town, 60 m by rail S of Warsaw, has dye-works, and a considerable distribution trade. Area of province, 4769 m. Pop 820,500, pop of town, 29,000.

**Rajputana**, a district of India, S of the Punjab, with the Aravalli Mountains stretching from N.E to S.W. across the whole region,

# ANIMAL PRODUCTS.





to the W. a sandy, ill-watered district with herds of sheep, goats, and camels, and to the E a tableland forming part of the great cattle-rearing part of India; to the N of Ajmere (Lake Sambhar) and along the boundary of Jodhpur there are important deposits of salt. Area, 130,252 m, of which 127,541 are native states Pop 5,096,000, of whom 4,619,000 are in the native states.

**Ramsgate**, a port of Kent, England, 79 m by rail ESE of London, with a depth at entrance of 20 ft at high water of spring tides, and 16 ft at high water of neap tides; regular steamer communication by English Channel and up the west coast with Liverpool, Fleetwood, Whitehaven, Douglas, Greenock, and Glasgow Pop 27,693

**Randers**, a town on the E coast of Jutland, Denmark, on Randers Fjord, 20 m up from the Cattegat, anchorage in 4 to 5 fathoms, depth on bar and at quays 15 ft, imports coal, timber, oil-cake, &c, exports butter, bacon, eggs, &c., salmon-fishing, manufactures of suede gloves Regular communication from Tyne. British vice-consul Pop 20,000

**Rangoon**, the chief town of Lower Burma, on the Rangoon or Hlaing River, about 20 m. up from the Gulf of Martaban, depth on bar 24 ft at high water of neaps, and 30 ft at high water of springs. Imports (valued at over £5,600,000—some 70 per cent. of the whole for Burma), coal, hardware, salt, tobacco, cottons, silk-twist, and general goods, exports (total value about £5,000,000—some 70 per cent of the whole for Burma) by far the greater part of the products of Burma—rice, timber, cotton, gold, shellac, copper, hides, horses, ivory, oil, rubber, &c. Tonnage entered and cleared about 2,500,000 Letters, 24 days, parcels, 34 Regular communication from London, Liverpool, and Glasgow Distance from London, 8030 m, Liverpool, 7960, Glasgow, 8065, Cardiff, 7850, Colombo, 1275, Calcutta, 790, Maulmein, 150, Singapore, 1100 (See Burma) Pop 235,000

**Raniganj**, large coalfield along the Damodar River in Bengal, India, 100 m N of Calcutta.

**Ratibor**, a town of Silesia, Prussia, on the Oder, 88 m. by rail SE of Breslau, with railway workshops, iron works, and manufactures of steel, machinery, paper, glass, furniture, &c. Pop 25,500

**Ratisbon**, or **Regensburg**, a town of Bavaria, on the S bank of the Danube, nearly opposite the mouth of the Regen, 82 m by rail NNE of Munich, with a trade in grain and salt, and manufactures of china and earthenware, brass and steel ware, leather, chemicals, and lead pencils. Pop 45,500

**Ravenna**, a town of Italy, E by S of Bologna, 5 m from the Adriatic, with which it is connected by the Candiano Canal, having a depth of 13 ft, though the basins at the

town have a depth of only from 9 to 12 ft, trade in wine and agricultural produce, and manufactures of silk, glass, paper, linen, &c; railway connection with Bologna and Florence; imports coal, timber, wine, and general goods; exports silk, flax, glass, grain, fruit, olive-oil, refined sulphur, &c Pop 13,000

**Rawal Pindi**, a town in the Punjab, India, between the Indus and Jehlam, 100 m. by rail E by S of Peshawar, great military centre, with a large transit trade between India and Cashmere and Afghanistan Pop. 88,000.

**Rawmarsh**, a town of the West Riding of Yorkshire, England, 2 m N of Rotherham, with coal in neighbourhood, and manufactures of iron, machinery, and china and earthenware. Pop 11,587.

**Rawtenstall**, a town of Lancashire, England, on the Irwell, about 18 m N of Manchester, with coal in neighbourhood and manufactures of cotton and carpets (both wool and felt) Pop 31,052.

**Reading**, the chief town of Berkshire, England, on the Kennet not far from its junction with the Thames, 36 m by rail W of London; important agricultural centre, with large biscuit factories, and nursery gardens and seed stores, manufacture of tin boxes Pop 72,214.

**Reading**, a town of Pennsylvania, United States, on the Schuylkill River, 58 m by rail NW of Philadelphia, railway centre, with railway workshops, and large manufactures of iron and steel goods of all kinds, and less important weaving of cottons, woollens, silks, and hosiery, and making of hats, paper, leather. Pop 79,000

**Redditch**, a town partly in Worcester and partly in Warwick, England, 12 m by rail SS W. of Birmingham, with manufactures of needles, pins, hooks and eyes, fish-hooks, and gut and fishing tackle Pop 13,493

**Red River**, a river of the N centre of the United States, from which it passes into Canada, it rises in Minnesota, and winding along the borders of that state and of N Dakota it enters Manitoba, and flows into Lake Winnipeg. It has a total length of about 700 m (of which some 160 are in Canada) and passes through a very fertile country

**Redruth**, a town of Cornwall, England, 8 m by rail WSW of Truro, with tin-smelting and many tin mines all round Pop 10,451

**Red Sea**, an extension of the Indian Ocean, passing north-westward, between Arabia and the continent of Africa, towards the Mediterranean, with which it is connected by the Suez Canal. It opens off the Gulf of Aden by the narrow strait of Bab-el-Mandeb, has a length of about 1200 m, with an extreme width of a little over 200, and at the N end breaks up into two still narrower and shallower arms, the Gulf of Suez on the W, which has a length of about 160 m and a width of about 30, and

the Gulf of Akaba on the E. which has a length of some 100 m., and a width of 20. The southern half has in most parts a depth of less than 100 fathoms, but in the northern half the depth is greater, running up to 400 fathoms, and reaching at one point over 1200 fathoms. The water is very salt owing to the great amount of evaporation and the fact that the sea receives practically no river water, and in consequence there is at the entrance a considerable inflowing current. There are coral reefs extending along both shores. From October to May the wind is the S.E. monsoon, and during the rest of the year the N.W. monsoon. Navigation is dangerous on account of the coral reefs and sudden gales. The country along both sides is hilly, and the heat during the day is intense, the mean temperature being over 95° Fahr., but the nights are cold owing to the great radiation.

**Reggio**, a seaport of Calabria, south Italy, on the Strait of Messina, with manufactures of silks, perfumes, terra-cotta, and gloves and stockings made from the byssus of the pinna shell; grapes, olives, and other fruits; fishing centre. Letters, 3 days. British vice-consul. Pop. 25,000.

**Reggio**, a town of central Italy 17 m. by rail S.E. of Parma, with manufactures of silk, hemp, and leather and some trade in timber. Pop. 20,000.

**Regina**, the chief town of Assiniboua, Canada, 357 m. by rail W. of Winnipeg; centre of administration of north-west provinces. Pop. 3,100.

**Reichenbach**, a town of Saxony, Germany, 11 m. S.W. of Zwickau, manufactures flannels, shawls, merinos, cashmeres, and other woollens; large dye and print works. Pop. 24,500.

**Reichenberg**, a town of Bohemia, Austria-Hungary, on the Neisse, 86 m. by rail N.E. of Prague, and 63 E.S.E. of Dresden, with extensive manufactures of cloth and other woollen fabrics, cottons, hosiery, leather, and hydraulic machinery. Pop. 34,500.

**Reims**, or **Rheims**, a city of the department of Marne, France, on the Vesle, 100 m. by rail E.N.E. of Paris, 25 m. N.N.W. of Châlons-sur-Marne, and on the canal connecting the Aisne and the Marne; extensive manufactures of merinos, cashmeres, flannels, and other woollen goods; cloths of mixed silk and wool; ironware, glass-making; surrounded by vineyards and centre for champagne. British vice-consul. Pop. 108,500.

**Remscheid**, a town of the Rhine province of Prussia, 6 m. S. of Elberfeld with extensive manufactures of cutlery and ironware (scythes, files, locks, irons for carpenters' planes, saws, &c.). Pop. 58,500.

**Renfrew**, a county of W. Scotland lying along the Clyde; coal, ironstone, and shale; and manufactures of thread, cottons, chemicals; ship-building and engineering works, sugar-re-

fining, print and bleach works, &c. The county town of the same name is famous for the building and equipment of dredgers. Area of county, 153,332 acres. Pop. 268,980; pop. of town, 9296.

**Rennes**, the chief town of the department of Ille-et-Vilaine, France, at the junction of the Ille and the Vilaine, 59 m. S.S.E. of St. Malo; railway centre, with good communication also by both river and canal; transit trade in agricultural produce, and manufactures of sailcloth, leather, linen, agricultural implements, &c. Pop. 75,000.

**Renton**, a town of Dumbartonshire, Scotland, on the Leven, 2 m. by rail N.N.W. of Dumbarton, with turker-red-dye-print and bleach-works. Pop. 5067.

**Resht**, a town of Persia, 14 m. to the S.W. of the S. end of the Caspian, and about 150 m. N.W. of Teheran, with an extensive trade in raw silk; centre of distribution; receiving sugar, woollens, linens, naphtha, and other goods from Russia, and cottons from Russia and from Britain through Bagdad and Tabriz; and exporting, mostly to Russia, rice, fruit, tobacco, cotton, dyes, &c.; silk to France. British vice-consul. Pop. 35,000.

**Retford**, East, a town of Nottinghamshire, England, on the Idle, 24 m. E. by S. of Sheffield, with manufactures of paper, rubber goods, and ironware. Pop. 12,339.

**Réunion** or **Bourbon** an island belonging to France in the Indian Ocean, about 420 m. E. of Madagascar; extreme length about 38 m., and extreme width 27. Climate in the lower ground very hot and somewhat unhealthy, and there are at times, especially in the rainy season (November to April), destructive hurricanes. Chief products sugar, coffee, tobacco, vanilla, spices, &c.; imports (total value about £900,000), food-stuffs (rice, grain, fish, &c.), machinery, and general goods; exports (total value about £700,000), sugar (more than half from vanilla, tapioca, perfume, and chonchou straw). The trade is mostly with France and French colonies; the only article of any importance sent from Great Britain is coal. About 381,000 tons entered and cleared every year. Mails from and to London every fortnight; letters 24d. per half-oz.; postcards, 1d. parcels not over 3 lbs. 3s.; between 3 and 7, 3s. 6d.; between 7 and 11, 4s.; parcels, 22 or 23 days. Regular communication from London. Distance from Mauritius, 130 m. British consul. Area, 970 m. Pop. 173,500.

**Reval**, or **Revel**, a port of Esthonia, Russia, on a small bay on the S. side of the Gulf of Finland, 232 m. by rail W.S.W. of St. Petersburg; very important trade, the imports being valued at over £6,000,000, and the exports at over £2,000,000. Of the total imports the United Kingdom sends 44 per cent.; of the exports it takes 42. Harbour which takes vessels up to 21 ft. is kept open in winter.

as much as possible by means of a very strong ice-breaker Imports cotton (40 per cent), machinery, copper, iron and steel goods, pig and wrought iron, gum and resin, coal, lead, yarn, hides, herring, tallow, oil, and provisions and general goods, exports butter, oats, flax, rye, wheat, hides, game, tow, veneer, linseed, mineral oil, oil-cake, wool, hemp, camel and other hair, goloshes, bristles, peas, asbestos, &c. The butter goes to Denmark, and thence to this country—we might just as well buy direct, Germany sends cotton (the United Kingdom also), coke, drugs, iron and steel, iron and steel goods, colours and dyes, gum and resin, copper, maize, machinery, rice, and southern fruits Of over 1,200,000 tons entered and cleared about one-fifth is British Regular communication from the Tyne, Hull, Leith, and Manchester Distance from London, 1230 m, the Tyne, 1100, Hull, 1140, Leith, 1135 British vice-consul Pop 65,000

Rheingau, a district extending along the right bank of the Rhine, opposite Mayence, for a distance of some 15 m, sheltered from N and E winds, soil and climate suitable for the production of excellent grapes, from which are obtained Johannisberger, Rudesheimer, Marcobrunner, and other well-known wines

Rhine, a great river of Western Europe, rising on the N side of Mount St Gothard, in Switzerland, and with a course of nearly 800 m through Switzerland, Germany, and Holland, to the North Sea Although it rises in Switzerland and reaches the sea in Holland it is essentially a German river, the greater part of the course, and by far the richest portion of the district drained by it, lying in that Empire From the E it receives the Neckar, the Main, the Lahn, the Sieg, the Ruhr, and the Lippe, and from the S and W the Aar, the Ill, the Nahe, the Moselle, and the Meuse Near its mouth it breaks up into a great many arms, the whole of Holland practically constituting its delta Of these the most important branches are the Waal and Lek By the Ludwig's Canal it has communication with the Danube, by the Rhone and Rhine Canal (length 217 m, depth a little over 6 ft) with the Rhone and the Mediterranean, by different canals with the Marne (and so with the Seine), and with the Zuider Zee Of the total length, about 550 m from Basle downwards are navigable, steamboats getting as far up as Mayence, while vessels of considerable size can reach Mannheim at the mouth of the Neckar, and steamers have often passed direct from London up as far as Cologne The upper part of the river is extensively used for floating timber down from the Black Forest and elsewhere The fisheries (salmon, sturgeon, lampreys, &c) are important. Area of basin about 80,000 m

Rhine Province, a province of the extreme W of Prussia, lying along the Rhine from

Mayence to the borders of Holland In the N and also in the extreme S are valuable and important coalfields, and there are also deposits of iron ore, manganese, lead, copper, and zinc The manufactures are extremely important, iron and steel, iron and steel goods of all kinds, brass, spinning and weaving of cotton and wool, hemp, and silk, about one-fourth of the whole surface under wood, and the crops—sugar-beet, hops, flax, hemp, and grapes (for wine)—are also important, as well as the rearing of cattle and sheep Area of province, 10,423 m Pop 5,760,000

Rhode Island, one of the E coast states of the United States, and the smallest of them; surface undulating, but nowhere reaching any great height Narragansett Bay, which extends inland for a distance of over 30 m, increases the coast-line so that it has a total length, inclusive of the inlet, of nearly 400 m Coal, iron ore, limestone, and granite, very important spinning and weaving of cotton; dye-bleach- and print-works, making of woollens, locomotives, screws, files, miscellaneous iron and steel goods, jewellery, rubber, leather, &c. Area, 1085 m Pop 429,000

Rhodes, an island belonging to Turkey, 11 m off the S W coast of Asia Minor, with an excellent climate, and fertile soil producing olives, grapes, oranges, lemons, onions, figs, tobacco, rearing of silkworms, sponge and coral fishing along the coast, takes British cottons and woollens through Smyrna, Constantinople, and Beyrout Mails for London as for Constantinople, but return uncertain, money orders to and from British vice-consul Area, 565 m Pop 30,000

Rhodesia, a great region of British South Africa, N of the Transvaal Colony, lying between 8° and 22½° S, and between 23½° and 33° 40' E, bounded NW by the Congo Free State, NE by German East Africa, E by British Central Africa and Portuguese East Africa, S by the Transvaal Colony, S W. by the Bechuanaland Protectorate, and W by German S W Africa and Angola The provisional boundary with the last two is formed by the upper Zambesi, a part of the boundary with the Congo Free State by the Luapula, and the boundary with the Transvaal by the Limpopo The country is named after the late Mr Rhodes and is the field of operations of the British South Africa Company It has an extreme length of about 980 m, a breadth varying from 100 to 600 m, and is divided into Southern Rhodesia, between the Zambesi and the Transvaal, with Mashonaland in the E, and Matabeleland in the W, North Western Rhodesia, or Barotseland, between the upper Zambesi and the Kafue, and North Eastern Rhodesia, to the E and N of the Kafue and the Zambesi below the junction of the two rivers The area is estimated at

500,000 m., of which about 144,000 are in Southern Rhodesia, and 120,000 in North Eastern Rhodesia. Pop of Southern Rhodesia, 498,509, of whom 11,000 are Europeans. The surface forms part of the great African plateau with a height of from 3000 to 6000 ft. above sea-level. The climate is everywhere delightful, with a temperature ranging from 49° Fahr. to 87°, and a rainfall of from 22 to 40 in., the greater part of which comes between the beginning of October and the end of April, the rest of the year being practically a dry season. The water-supply is, however, good, and irrigation rarely necessary. In Southern Rhodesia there are some 2800 m. of road; and the Stevenson Road from Karonga near the N. end of Lake Nyassa to Kituta near the S. end of Lake Tanganyika runs along close to the N.E. border. The railway from Cape Town northward by Mafeking is continued to Bulawayo (712) in Southern Rhodesia and from this north-eastward and eastward to Salisbury (200 m.) and Umtali (170 m.) and thence through Portuguese East Africa to Beira, while another section passes north-westward 167 m. to the Wankie coalfield, and is now (1903) being continued across the Zambesi over the Victoria Falls (111 m.), and northward across the Kafue through the copper fields to Sitanda 300 m. farther. From this it is proposed ultimately to continue the line through North-Eastern Rhodesia to the S. end of Lake Tanganyika, the whole forming part of the Cape to Cairo route. There are a number of branches opening up the leading mineral fields, so that no mine of importance at present worked is more than 20 m. from a railway. The development of the Wankie coalfield is of the utmost importance, as the use of the local coal will not only effect a saving on the working expenses of the railways themselves but of some 50 per cent on the cost of fuel for the crushing batteries at the various mines—seams near surface, and coal said to be only 5 per cent. inferior to Welsh coal. Including the lines outside the borders of Rhodesia—from Vryburg to Mafeking northward through Bechuanaland (Vryburg to Bulawayo 586 m.) and from Umtali to Beira (205 m.)—the British South Africa Company have now open 1639 m. of railway, and when the lines at present under construction are finished there will be a total of 2193 m. The soil is excellent and much of it very suitable for the growing of Indian corn of which a great deal is even now cultivated by the natives. With proper agricultural methods and appliances much might be done in this direction. Great tracts are suitable for rearing of cattle, sheep, and goats; and elsewhere there are districts suitable for the culture of British and colonial fruits—oranges, apples, lemons, figs, peaches, apricots, bananas, &c.—but, unfortunately a good deal

of the crop ripens after the beginning of the rains and is thus unsuitable for distant markets. Tobacco of excellent quality is being produced in large quantity, cotton is being tried on a large scale, and rubber and indigo will in all likelihood be grown with profit. The total area under cultivation is meanwhile only some 550,000 acres, but it is rapidly spreading. In many places two crops may be reaped in the year. The great coal supply of the S., and the immense water-power at the Victoria Falls (for electricity) may by-and-by lead to industrial developments, but the immediate wealth and the promise of the country are in its minerals. There are enormous supplies of coal everywhere throughout the northern part of Southern Rhodesia between the Bulawayo-Salisbury Railway and the Zambesi, and also in some places to the N.W. of the River, in the extreme S. at Tuti, and in the S.E. on the Sabi River. All along the railway there are gold-fields in close succession; while iron and copper are found S. of Salisbury, copper near the coal on the Sabi River, iron to the N.W. of Bulawayo, and very rich copper deposits in the great bend of the Kafue in the extreme S.W. of the North Eastern province. There are also lead and zinc ores of great value, and besides the quartz gold-mining it is likely that ere long the alluvial gold of the river-beds of Mashonaland and elsewhere will be worked by dredging. Kieselguhr is found, and it is probable that there are paying quantities of salt, graphite, arsenic, and antimony. The annual output of gold is now nearly up to 200,000 oz. The chief towns are Bulawayo, and Salisbury (pop. 1500). Mails from and to London every week, letters, 2d. per half-oz., postcards, 1d.; parcels (North Eastern), not over 1 lb., 1s. 6d.; and 1s. 6d. for each additional lb. or fraction of a lb. up to 7 lbs., (Southern) 3d. more in each case, money orders exchanged with same districts; telegrams (Northern), 3s. 5d. a word, (Southern) 3s. 2d.; letters to Bulawayo, 3 weeks, to Salisbury, 4 weeks, native runners reach other points in from 18 to 25 days more.

Rhône, a department of centre S.E. France, lying along the W. bank of the Rhone and Saône; surface hilly, the spurs of the Cevennes reaching here a height of from 3000 to 6300 ft., considerable amount of coal, and mining of silver-lead, copper, and manganese; smelting of iron and copper, railway works; important manufactures of silk, velvet, plush, cotton, muslin and embroidered muslin; print- and dye-works, chemical works; vines and mulberries. Area, 1077 m. Pop. 843,500.

Rhone, a large river of S.E. France, rising on the W. side of Mount St Gothard, Switzerland, and flowing to the Mediterranean, with a total length of 504 m. It receives from the E. the Arve, Isère, Drôme, and Durance,

from the N the Ain, and Saône; and from the W the Ardèche, and Gard. The navigation was much improved in 1880-92, the channel straightened, the flow made more gradual in different places, and dangerous rocks removed. There is now depth for boats of  $5\frac{1}{2}$  ft almost the whole year, and for boats of  $6\frac{1}{2}$  ft for 10 months. The violence of the current is still a drawback, but this it is proposed to overcome by wire cables working round drums and hauling boats up the worst parts. With canal communication with Marseilles, and with the other navigable rivers of France, Belgium, and Germany, the Rhone might become an important link in the communication between north-western Europe and the Mediterranean, the Indian Ocean, and the East. The river is connected by the Saône and Canal du Centre with the Loire, with the Rhine (*see* Rhine), and by the Canal of Burgundy with the Seine. Area of basin, 38,000 m.

**Richmond**, a town of Indiana, United States, 67 m by rail E of Indianapolis, railway centre, with manufactures of agricultural machinery, traction engines, boilers, furniture, flour, &c. Pop 18,500.

**Richmond**, a town of Virginia, United States, on the James River about 150 m up from the mouth, and 116 m by rail S. of Washington, great coal-mining and railway centre, and water-power also supplied by the falls on the James River; important manufacture of tobacco and cigars, iron works, and making of iron ware, machinery, waggons, locomotives, nails, paper, artificial manures, electro-plate, cottons, and flour. Vessels drawing up to 16 ft can reach the city. Imports salt and general goods, and exports cotton, tobacco, grain, flour, and cattle. British vice-consul. Pop 85,000.

**Riga**, a port of Livonia, Russia, on the Duna, 7 m up from the Gulf of Riga, and 330 m by rail S W of St Petersburg, depth of water on bar varies from 22 to 26 ft, and the channel has been dredged to 24 ft. Imports (total over £6,000,000), coal, machinery, steel, cork, dye-woods, herring, manure, iron, copra, wine, coffee, cotton, clay, chalk, resin, rice, oil, hops, sulphur, and miscellaneous goods, exports (total value nearly £8,000,000), rye, oats, wheat and barley, timber, flax, eggs, skins and hides, oil-cake, hemp and hemp yarn, butter, linseed, hair, horses, petroleum, &c. Tonnage

manure, paper, &c, for which British makers should be on the outlook. The export of eggs and butter, partly obtained from Siberia, has, in recent years, rapidly attained large proportions, special cold-storage arrangements and steamers for the United Kingdom. The *Gulf of Riga* has a length of about 110 m from N to S, and a width of nearly 100 m. Letters, 5 days. Regular communication from London, the Tyne, Hull, and Manchester. Distance from London, 1180 m; the Tyne, 1050; Hull, 1090, Leith, 1080, Copenhagen, 470. British vice-consul. Pop 283,000.

**Rio de Janeiro**, a port of Brazil, in a coast state of the same name, on the W side of the Bay of Rio de Janeiro, which has a length from N to S of about 17 m, and a width of from 2 to 15. The place sends out more than half of the whole exports of Brazil, and receives over 40 per cent of the imports. Depth at entrance sufficient for the largest vessels, and from 30 to 70 ft in almost all parts of the harbour. From November to May loading and discharging must take place by lighters, but from May to November there is from 12 to 21 ft of water alongside the private quays, dry docks of from 230 to 520 ft in length, with depths of from 16 to 24 ft on the sills at high water of spring tides. Imports (total value about £11,000,000), machinery, coal, iron and other metals, hardware, cottons, woollens, and general goods, exports (total value about £8,000,000), almost entirely coffee, but gold, manganese ore, salted hides, tobacco, diamonds, rubber, and rose-wood are also sent away. Nearly half the exports go to the United States, and of the imports the British Empire sends about 33 per cent. Shawls, upholsterers' stuffs, and ropes (supplied by Germany); paper and stationery (Germany, France, and Belgium), cement, earthenware and glass ware (Belgium and Germany), copper wire (United States and Germany), barbed wire (United States), steel rails and waggon wheels (Belgium, United States, and Germany), iron pipes (Belgium), brass-headed nails (Germany), door furniture (France), enamelled sinks (Germany), enamelled hollow-ware (Germany), and agricultural implements (United States and Germany) might all just as well be supplied by the United Kingdom. Improved machinery and apparatus connected with the cultivation

Liverpool, and Southampton Distance from London, 5200 m, Liverpool, 5125, Glasgow, 5235; Cardiff, 5020 British consul-general Area, 26,630 m Pop, excluding the city, 877,000, pop of city, 750,000

Rio Grande do Sul, a province of Brazil, in the extreme S, lying between the Atlantic and the River Uruguay, plateau in the N., in the S grass covered plains, soil fertile and ought to produce large crops, but meanwhile the pastures in the S and S W are given up to the rearing of cattle, hides, horse-hair, bones, and tallow constitute the chief exports of the district, coffee and sugar-cane are grown in the N., and there is a small production of wine in the N W, coal, gold, lead, agates, &c. The chief town, of the same name, in the S, at the S end of the Patos Lagoon, is an important seaport, bar can be passed at any time by vessels of 13 ft. or under, but those drawing between 13 and 15 ft may be detained for 2 or 3 days till there is sufficient depth of water. Vessels anchor about 7 m out and load and discharge by means of lighters. Imports coal, salt, and general goods, exports the productions of the province already noted. In cottons, hardware, cutlery, men's hats, and corrugated iron, Germany is beating the United Kingdom. Attractive get-up, tasteful and light (customs duty being by weight) putting up, and commercial travellers showing samples would remedy matters. Distance from London, 5870 m, Liverpool, 5798, Glasgow, 5900. British consul. Area of province, 91,250 m Pop 897,500, pop of town, 25,000

Rioja, a province in the N W of the Argentine Republic, surface mountainous, reaching an extreme height of nearly 20,000 ft., valleys 9000 ft. up, drained by Bermejo, all the small streams being used for irrigation, mining of coal, copper, silver and silver-lead, iron, and gold, wheat, maize, cotton, grapes, chief town with same name. Area of province, 34,546 m. Pop 78,000, pop of town, 6000

Rive-de-Gier, a town of the department of Loire, France, 13 m E N E of St Etienne, centre of a coal and iron district, with iron-smelting, and manufactures of iron and steel goods, machinery, railway plant, agricultural implements, &c, glass works and silk factories. Pop. 16,000

Roanne, a town of the department of Loire, France, 52 m. by rail W N W of Lyons, with an important transit and distribution trade, and manufactures of cottons, muslins, and woollens, machinery, and earthenware. Pop 35,000

Rochdale, a town of Lancashire, England, on the Roch, 11 m N N E of Manchester; with manufactures of flannels and other woollens, cottons, machinery, &c. Pop 83,112

Rochefort, a port and naval station of the department of Charente-Inférieure, France, on the Charente, 9 m up from the sea, and 18 m.

by rail S E of La Rochelle, depth of river 20 to 25 ft. at low water, in docks 21 to 30 ft at high water of spring tides; shipbuilding, and imports of coal, phosphates, wood, and pyrites. British vice-consul. Pop 36,500.

Rochelle See La Rochelle

Rochester, a port of Kent, England, on the Medway, 30 m E S E of London, river takes vessels of any size, imports coal, grain, timber, naval and military stores, exports cement, manufactures of agricultural implements, including traction engines. Pop 30,622

Rochester, a city of New York, United States, on the Genesee River, 7 m up from Lake Ontario, and on a canal connecting the Genesee with Lake Erie, 67 m by rail E N E. of Buffalo. Three falls on the river afford a valuable supply of water-power, which is used for generating electricity for lighting and haulage purposes, and for many of the industries, transit trade for the Great Lakes, nurseries and seeds, fruit-canning, flour-milling, and the manufacture of ready-made clothing, boots and shoes, rubber goods, agricultural implements, photographic appliances, iron-founding. Pop 163,000

Rockhampton, a town of Queensland, Australia, on the Fitzroy River, at the head of navigation, 43 m from its mouth, and about 420 ordinary m by sea (335 in a direct line) N.W of Brisbane, the commercial centre of the whole of the central division of Queensland. Vessels drawing from 16 to 17½ ft. can reach the quays at spring tides. Extensive gold-fields (Mount Morgan) and grazing districts in neighbourhood. Broadmount harbour at the mouth of the river, 24 m distant by rail, has accommodation for the largest vessels, and at Port Alma, 36 m down the river, there is a natural harbour with deep water. The trade is very considerable, the exports alone amounting to nearly £2,500,000. Tanning, boot-making, and meat preserving, railway communication with the interior by the Central Railway (427 m), imports general goods, exports frozen meat, gold, wool, copper, hides and skins, tallow, &c. Regular communication from London. Pop 15,500

Rocky Mountains, the name given to the portion of the great Cordilleran system, which extends northward from Mexico to Alaska, with many peaks of between 10,000 and 14,463 ft. (the latter being the extreme height). They are crossed by many passes of from 3700 to 10,000 ft, and at one or two points by convenient openings, the summit level of which is still higher. The most important of the passes, nowadays, are the Wapta, or Kicking Horse, Pass (5323 ft), where the Canadian Pacific Railway crosses, the Marias Pass (8500 ft), where the Great Northern Railway crosses, and the Portneuf Pass (6610 ft), where the Northern Pacific Railway crosses,

while the summit levels of the railways farther S are at altitudes of from 6500 to 7600 ft. See Pacific Railways

Rome, the chief town of Italy, on the Tiber 15 m from its mouth, with some little manufacture of silk ribbons, false pearls, jewellery, mosaics, and small bronzes and other trinkets and objects of art. Distance from London (rail, &c.) 1192 m Time for noon at Greenwich, 12 50 p.m. Letters, 1 day 21 hours; parcels, 3 days 15 hours British consul Pop 463,000

Roquefort, a town of the department of Aveyron, France, 70 m W.N.W. of Nîmes, celebrated for cheese, made from a mixture of sheep and goat milk Pop 1000

Rosario, a town of the Argentine Republic, on the Paraná, 240 m up from Buenos Ayres, from which it is by rail 190 m N.W. and 1000 below Asuncion. From December to July vessels up to 19 ft can lie at the quays, but from August to November it is unsafe for vessels drawing more than 18½ ft. to cross the bar of Martín García about 8 m down the river The trade, the total value of which is estimated at over £7,500,000, is very important; the chief imports (total value over £2,000,000) are textiles, coal, drugs, ready-made clothing, glass ware, hardware and agricultural implements, lumber, metal ware, stationery, tobacco, provisions, and general goods, exports (total value over £5,500,000), wheat, linseed, maize, wool, hides, and quebracho Of the imports Britain sends one-third, the United States less than one-fourth, and Germany and Italy about one-eighth each The distribution of the exports cannot be accurately given Of 2,000,000 tons entered and cleared 60 per cent are British. Regular communication from London, Liverpool, and Southampton. British consul Pop 112,500

Ross and Cromarty, a large county of the N of Scotland, grouse moors and deer forests, salmon and other fishing on coast and in streams, sheep-rearing, flat ground in E bears heavy crops Area, 1,976,707 acres Pop 76,450

Rostock, a port of Mecklenburg-Schwerin, Germany, on the Warnow 7 m up, with a great trade in wool, cattle, and horses, shipbuilding, and manufactures of hardware and machinery, leather, tobacco, chemicals, &c, river takes vessels up to 16 ft Imports coal, iron, herring, timber, petroleum, and general goods of all kinds, exports wheat, barley, peas, wool, flax, rags, and cattle Large vessels may unload part of their cargo at the port of Warnemünde at the mouth of the river Distance from London, 815 m, Hull, 720, Leith, 715 British vice-consul. Pop 55,000

Rostov-on-Don, a seaport of Russia, on the Don, 25 m up from the Sea of Azov, with excellent road and rail communication, fishing centre, shipbuilding, tanning, flour mills, making of caviare, ropes, &c, imports general goods, exports (value over £3,000,000) wheat,

rye, barley, linseed and rape-seed, oil-cake, wool, tallow, &c. British vice-consul. Pop. 120,000

Rotherham, a town of the West Riding of Yorkshire, England, at junction of Rother and Don, 5 m by rail N.E. of Sheffield, coal and iron, iron smelting, and manufactures of stoves, grates, glass, pottery, soap, &c Pop. 54,318

Rotterdam, a great port of South Holland, at the junction of the Rotte and Maas, 20 m. up from the mouth of the Maas, and 45 by rail S.W. of Amsterdam; ships drawing 22 ft. of water can reach the harbour at any time, and vessels of 24 to 27 ft draught at high water, by the New Waterway, which was formed for navigation in 1872, and the run along which occupies about 2 hours There is a very large trade (more than half of that of the Netherlands) as the port receives all the products of the Dutch colonies, and is the centre of transit for commerce between Britain, Holland, and all foreign countries, and the districts of Germany that can be reached *via* the Rhine The over-sea tonnage entering and leaving every year with cargoes is some 4,500,000 tons, and to this there falls to be added the tonnage of the boats plying up the Rhine, and along the canals and other waterways, which amounts to somewhere about double this, so that the total is probably about 13,000,000 tons There is also a considerable amount of fishing, and other industries are shipbuilding and steel works, sugar-refining, distilling, manufacture of tobacco, chemicals, margarine, chocolate, &c.; imports wheat, rye, oats, maize, ores and metals, coal, drugs, indigo and other dye-stuffs, seeds, tallow and grease, chemicals, sugar, coffee, rice, tobacco, petroleum and other oils, cotton, &c.; exports linen, flax, butter, cheese, cattle, sheep, horses, pigs, sugar, and Hollands gin Letters, 10 hours, parcels, 17 hours Regular communication from London, Grimsby, Goole, Hull, the Tyne, Leith, Grangemouth, Manchester, Swansea, and Bristol Distance from Hull, 215 m, the Tyne, 285; Leith, 390 British consul. Pop 332,500.

Roubaix, a town of the department of Nord, France, 7 m by rail N.E. of Lille, canal communication with the Scheldt, manufactures of cottons, tweeds and other woollen cloths, shawls, plush, velvet, thread, and machinery Pop 124,500

Rouen, a town of the department of Seine-Inférieure, on the Seine, 70 m up from Havre; 87 m by rail N.W. of Paris, vessels of 22 ft. can go up the river at high tide and lie at the quays. Imports coal, timber, petroleum, metal goods, ores, china-clay, and general goods, and exports cottons, sugar, glass-sand, fireclay, sulphate of lime, mill-stones, &c Great centre of spinning and weaving of cotton (nankeens, cotton velvets, dimity, &c), spinning and weaving of woollens and linsens and mixed silk and wool (blankets, broadcloth, flannels,

&c), shipbuilding, machinery, refining of petroleum, manufacture of chemicals and paper. Regular communication from London, Hull, Manchester, Swansea, Bristol, and Glasgow. British consul Pop 116,316

Roulers, a town of W Flanders, Belgium, on the Mandel, 19 m. by rail S W of Bruges, with manufactures of cottons, woollens, lace, silk-ribbons, chicory, &c Pop 22,000

Roumania, a kingdom of south-eastern Europe, lying between 43° 37' and 48° 13' N, and between 22° 30' and 29° 42' E, and bounded N E and N by Russia, from which it is separated by the Pruth and the Danube; E by the Black Sea, S by Bulgaria, from which it is separated by the Danube, from the Iron Gates downward for 300 m., W by Servia, and N W by Austria-Hungary. In shape somewhat like a boomerang, it has a length from end to end along the curve of some 500 m, an average width of about 130, and an area of 50,720 m. Part of the Carpathians occupy the inner edge of the curve, along which they have a height of from 3000 to 9000 ft, and from these the surface slopes to the plain of the Danube. To the E of the lower part of the river, and between it and the Black Sea (along which there is a coast-line of 140 m), is the Dobruja, which has an average height of 500 ft, and an extreme height of over 1760 ft. The drainage is carried off by the Pruth and the Danube, and the many streams flowing to them from the mountains, a considerable number of which dry up, however, in summer. The climate is strongly continental, with a great daily and seasonal range—from 19° Fahr in winter to 95° or over in summer. The winter mean is 27° and the summer 72°, while there is a rainfall of over 25 in, and a snowfall of 28 in. The government is a hereditary limited monarchy with a Senate and a Chamber of Deputies. The pop is 5,913,000, of whom 70 per cent are connected with agriculture. There are over 2000 m of railways belonging to the state, and the Danube forms a great line of water communication across the N E and E of the country, and all along the southern border up to the Iron Gates. Of the cultivated area, 34 per cent are under maize (which is the most important crop), 27 per cent under wheat, 10½ under barley, 5 under oats, over 3 under rye, and colza, hemp and linseed, plums, peaches, walnuts, apples, pears, grapes, and tobacco are also of considerable value, while beet is grown for sugar, there are large numbers of sheep, cattle, pigs, and horses. Coal, petroleum, and salt are worked, and petroleum is exported as well as timber, the trees including oak, elm, and beech. Apart from agriculture, the chief industries are the making of beet-sugar, fisheries, and the making of paper, woollen cloth, leather, boots and shoes, and

cement. The salt mining is a government monopoly, and so are tobacco manufacture, and the making of matches, playing cards, gunpowder, and cigarette paper. Both imports and exports vary greatly in value, the former running from £8,500,000 to £15,500,000, and the latter from £6,000,000 to £11,300,000. The chief imports are textiles, metals and manufactures thereof, colonial produce, chemicals, hides, colours, pottery, glass, oil, wax, paper, and vegetable drugs, the chief exports, cereals, petroleum, timber, fruit, animal products, &c. Of the former Great Britain sends about one-sixth, Austria-Hungary nearly one-third, Germany about one-fourth, and France about one-fourteenth, of the exports. Great Britain takes about one-eighteenth, Belgium over one-third, Austria-Hungary about one-eighth, Germany one-fifteenth, and Italy about one-eighteenth. The chief articles of British produce and manufacture sent to Roumania (total value £1,200,000) are cottons and cotton yarn and thread (over half), coal, sheet iron, tin and tin-plate, woollens and worsteds, machinery, soda compounds, and oxide of zinc and other chemicals, and there is a re-export of foreign and colonial merchandise to the value of £60,000 (jute, tallow and stearine, &c), while other parts of the British Empire send goods, sometimes amounting in value to £1,000,000 or over. The productions sent by Roumania to the United Kingdom have an annual value of from over £2,000,000 to nearly £4,000,000, the chief being maize (generally about two-thirds of the whole), other kinds of grain (barley, wheat, &c.), oil-seeds (flax, rape, &c.), petroleum, sawn timber, and dried vegetables. The total tonnage entered and cleared is over 15,000,000, and the mercantile navy of the country has nearly 75,000 tons. There is a British consul-general at Galatz, and vice-consuls at Braila, Bucharest, Constantza, and Sulina. Mails from and to London four times daily, letter, 2½d per half-oz; postcards, 1d., parcels, *via* Hamburg, under 3 lbs, 2s, between 3 and 7, 2s 6d; between 7 and 11, 3s; *via* Cologne, 3d more in each case, money orders to and from, telegram, 3½d a word. The coin of account is the leu = a franc. Metric system official, but Turkish weights and measures in common use. The Roumanian flag has three vertical bars—blue, yellow, and red, the blue next the staff.

Roxburgh, a county of S E Scotland, lying along the English border, sheep-grazing and manufactures of woollens. Area, 426,060 acres. Pop 48,804

Ruhr, a river of Prussia, flowing through Westphalia to the Rhine, along its basin is an extensive and rich coalfield, with a length of 60 m, a breadth of from 20 to 25, and an area of about 750 m, the lower part of the river, from Witten 47 m downward, is canalised.

Ruhrort, a town of the Rhine province of Prussia, 25 m. by rail N of Dusseldorf, with a very large river harbour, coal, iron, and iron works, in neighbourhood; iron ware, and great trade in timber, &c Pop 12,500

Runcorn, a river port of Cheshire, England, on the Mersey, 12 m E S E of Liverpool, and 28 W S W of Manchester, at the junction of the Bridgewater Canal and the Manchester Ship Canal, docks from 14½ to 19 ft at high water of spring tides, and at a quay alongside the Manchester Ship Canal vessels of 24 ft draught can be berthed; iron-founding, leather-making, and chemical works Pop 16,491.

Russia, a great empire of Europe and Asia In Europe it occupies the whole eastern half of the continent, and in Asia all the northern half In this wide sense the country lies between 36° and 77° 30' N, and between 18° E and 169° 44' W, and is bounded N. by the Arctic Ocean, E by Behring Strait, Behring Sea, and the Sea of Okhotsk, S by the Chinese Empire, Afghanistan, Persia, Turkey in Asia, and the Black Sea, S W by Roumania and Austria-Hungary, and W by Germany, the Baltic, the Gulf of Bothnia, and Sweden The area is about 9,176,900 m, of which 2,095,616 are in European Russia (including Finland and Poland), 180,843 in Caucasus, 1,548,825 in Central Asia, and about 5,350,000 in Siberia European Russia (to which we shall here confine ourselves, Siberia being separately noticed) has, on the N, W, and S W, the boundaries already given, and on the E. Asiatic Siberia along the Ural Mountains and Ural River, and on the S the Caspian, Turkey in Asia, and the Black Sea It has thus a length and width of about 1600 m The surface is an undulating plain with an average height of from 500 to 900 ft, reaching an extreme elevation of 1100 ft in the Valdai Hills, midway between St. Petersburg and Moscow, and having a plateau of 1000 ft. for some distance S of them Of course the ground also rises on the E border in the Urals, and on the S in the Caucasus Although the Valdai Hills are neither far-spreading nor high they are very important owing to the number of large rivers that rise in or near them, and whose approach to one another here gives facilities for inter-communication All the S E of the country is drained by the Ural and Volga and their tributaries (Caspian), the S by the Don, Dnieper, and Dniester, and their tributaries (Black Sea), the W by the Bug-Vistula, Niemen, Duna, Neva, &c (Baltic and Gulf of Finland), and the N. by the Onega, Northern Dwina, and Mezen (White Sea), and the Petchora (Arctic Ocean) The climate of the great part of European Russia is typically continental—a hot summer, a cold severe winter with sharp breaks and changes, and dry continental winds

These conditions become, of course, more marked in the centre and towards the E Considering the range of latitude the differences between N. and S are less than might be expected, the temperature often falling in winter to 20° Fahr even in the S In summer, on the other hand, the temperature far N. rises to over 85° In the N the rivers are frozen for over 6 months, in the centre for 3½ to 4½, and in the S from 2½ to 4 The rainfall varies from 25 in. along the Baltic, to 14 in the S and S E, and 6 at N. end of Caspian

Government, &c —The government is an absolute monarchy, all power being centred in the Emperor, whose will is the only law The pop numbers 129,000,000 of whom 94,215,000 are in European Russia, 9,456,000 in Poland, 2,593,000 in Finland, 9,249,000 in Caucasus, 7,721,700 in Central Asia, and 5,727,500 in Siberia In European Russia, exclusive of Finland, and the government of the Vistula (Poland), there is an adult working population of 35,712,500, of whom 28,902,000 are village workers and 1,222,500 factory and mill hands; or, if textiles, metals, and mining be all included, the large industries employ 2,170,000 hands There are also some 7,000,000 to 8,000,000 peasants engaged in home industries during the period of the year when they have most leisure from field-work Cotton spinning and weaving employs about 316,000 hands, woollens, 137,000, flax, 52,000, silk, 38,000, hemp and jute, 23,000, and dyeing, printing, bleaching, &c, 60,000 The winning of metallic ores gives employment to 287,000 men—gold, 77,500, iron, 42,000, coal, 70,000, salt, 16,000—and smelting, puddling, &c, to 306,000; mechanics in engineering and machine-shops number 121,000, those engaged in the manufacture of other metal goods, 93,000, petroleum workers, 39,000 (36,000 at Baku); making of flour, sugar, &c, 263,000, and making of bricks and tiles, earthenware, porcelain, glass, &c, 143,000

Communications —The rivers of European Russia, as we have already seen, radiate from a centre where their approach to one another facilitates the interchange of commodities from one basin to another, whether by canal, road, or rail The disadvantages of the rivers as commercial highways are the long period during which many of them are frozen, and the shrinkage in summer caused by the long, slow flow through plains exposed to great heat. The waterways are therefore at their best in spring, when they are swollen by the melting snow and ice, and in autumn when they are fed by rain Of 51,800 m of waterway available in European Russia, and 55,200 in Asiatic Russia, only about 1400 are artificial The basin of the Volga is connected with that of the Neva by the three systems of Vishni-Volotchok, Tichvin, and Maria, and with that

of the Northern Dwina by the system of Duke Alexander of Wittenberg, the Dnieper is connected with the Duna by the Berezin system, with the Niemen by that of the Ogini, and with the Vistula by the Dnieper-Bug system, and the Niemen and Vistula are themselves connected by the Augustov system. In all there are 220 m of canal connecting river systems, 320 m cut round rapids, shallows, &c, and 960 m of rivers with sluices and locks, while a passage 106 m long is now (1903) being formed between the Obi and the Yenesei. The goods carried over the waterways of European Russia in boats and rafts amount to over 30,000,000 tons, of which half is on the Volga. The cost of carriage varies from seven-tenths of a penny to a little over 3d per ton per mile. The length of railway open is about 36,000 m, of which two-thirds belong to the state, while some 7000 m are being constructed.

*Productions and Resources*—European Russia is an agricultural country, where mining and manufactures, valuable as these are rapidly becoming, occupy, meanwhile, a subsidiary position in comparison with the productions of the soil. Cereals alone account for some 44 per cent of the exports, and other agricultural productions bring the proportion up to 69 per cent. Of a total area in European Russia of 1,222,270,000 acres, it is estimated that there are some 1,081,461,000 that can be used, and of this 316,435,000 are set down as arable land under cultivation, 166,011,000 as meadows, pasture, &c, 407,990,000 as forests, and 191,025,000 as lands fit for use, and that will gradually be brought within the arable or pasture categories. The average annual export of wheat is some 54,493,000 cwts, rye, 21,218,000, barley, 27,987,000, oats, 17,067,000, maize, 8,950,000, other cereals, 11,454,000. There is also along the Volga, in the centre, and in the S, of Russia a great manufacture of flour, the total output being some 314,000,000 cwts, of which Nijni Novgorod has 3,224,000, Kazan, Kostroma, Rybinsk, and several districts in the centre nearly 1,000,000 cwts each, and in the S Odessa and Rostov have over 1,000,000 each, and Klementz, Elisabethgrad, and Ekaterinoslav, nearly 1,000,000 each. The average export of wheat flour is over 1,185,000 cwts, of rye flour 1,830,000, and of other flour 23,000,000, while the export of bran, dried oatmeal, chaff, and other refuse of the grain-grinding, reaches an average of over 7,340,000 cwts. Flax is cultivated for fibre and seed—the former in the districts round the lakes, along the Baltic provinces, and about Tver and Jaroslav, and the latter through Bessarabia, Kherson, Tauris, Ekaterinoslav, and the Don province. The export of fibre is valued at some £5,500,000, of which 30 per cent or more go to Great Britain, of seed and oil-cake at over

£3,000,000, Great Britain again taking over 30 per cent. Hemp is cultivated in the same districts as the flax for seed, and the total fibre export has a value of over £1,000,000, of which Germany takes three-quarters; the export of seed and cake has an additional value of over £200,000. Of other seed-plants, rape is grown in the S and S W, the export value of seed and cake being some £800,000, the chief markets Great Britain and Germany; poppies are grown for oil in the S W and S centre; and sunflowers in Voronezh, Saratov, Tambov, Samara, Kursk, the Don, and Kharkov, the oil (mainly used in the country) being valued at some £100,000, and the cake (exported) at over £600,000. Clover, and other forage and pasture plants are cultivated in the S.W. and along the Baltic and Vistula for seed for export, the chief places of outlet being St Petersburg, Libau, Riga, and Odessa, total value over £300,000 a year. Fruit is grown in considerable quantities—apples, pears, cherries, plums, and in S apricots, peaches, almonds, &c—for use fresh, dried, and made into preserves, in the Crimea, Bessarabia, Podolsk, the Vistula and Baltic regions, the central part of the Volga, the Caucasus and Trans-Caucasus, and the S part of Siberia. The export, which includes bilberries and cranberries, is, however, small. The vine is cultivated, and wine made, in the governments of Bessarabia, Kherson, Ekaterinoslav, Taurida, the southern parts of the governments of Podolsk and Astrakhan, the Don province, the extreme S. of the government of Saratov, and the Caucasus, in Europe, and the Trans-Caspian and Syr Daria regions in Asia. The best wine comes from Bessarabia, the most from the Trans-Caucasus. The vine yield is about 66,000,000 gallons of wine, 2,200,000 gallons of spirits, and 7500 tons of raisins. The chief beet regions are Kiev, Podolsk, Kharkov, and Kursk, and along the Vistula. Over 100,000 tons of sugar are exported, Great Britain, Italy, and Persia taking each some 25 per cent. Tobacco is grown all over the S, the total area under this crop being some 150,000 acres, of which over two-thirds are in European Russia, the remainder in North Caucasus (one-fourth), Trans-Caucasus, Siberia, and Turkestan. The most important governments are in Little Russia (Middle Dnieper), Bessarabia, Tauris, Tambov, and Samara. The export is considerable. The sheep of Russia number over 70,000,000, the cattle over 43,000,000, the horses some 26,000,000, and the pigs some 14,000,000. Horses are exported (mostly to Germany, though Great Britain takes about one-seventh) to the value of over £550,000 a year. Butter is now largely made for home consumption and for export, the foreign demand, and the opening up of the pasture districts of western Siberia by the Siberian Railway, having given

a great impetus to production. The butter sent out has reached a total value of £1,500,000, and there is an export of milk worth £30,000. Hides and skins, wool, bristles, hair, and horns are products of considerable value, the hides sold at the Nijni Novgorod fair alone being valued at some £1,300,000, while the total value of the exports of leather, hides, and skins is over £1,300,000—the last two from cattle, calves, sheep and lambs, goats, horses, rabbits, hares, wolves, foxes, beavers, sables, &c. The bulk goes to Germany, Great Britain coming next. The wool production is about 2,500,000 cwts., of which 40 per cent are merino, but the export is only about 300,000 cwts. (over £650,000), the bulk of which goes to Germany. The export of bristles is valued at over £600,000, and of horse-hair at nearly £300,000, of which Germany takes nearly two-thirds, and Great Britain one-fifth. The export of poultry, eggs, &c., is valued at over £4,400,000, of which 75 per cent are for eggs, 12 per cent for geese, and the remainder for other poultry, and feathers and down. For the eggs the chief outlets are Riga, St Petersburg, and Libau, Germany taking, of eggs in shell, 37 per cent, Austria-Hungary 30, and Great Britain 22; while yolks are taken by Germany, Denmark, Great Britain, and Holland, and whites by Germany, and Great Britain. The other poultry, and down and feathers, which have each an annual value of some £200,000, go to Germany, Austria-Hungary, Great Britain, and Holland. The export of fish and fish-products is valued at over £450,000, of which more than half is caviare—sent to Germany, Turkey, Roumania, Austria-Hungary, Greece, and Bulgaria. Salted and smoked fish go mostly to Roumania, and the products of the fishing in the various rivers, lakes, and seas, consumed in the country itself, are, of course, enormous. Russia is exceedingly rich in minerals. The Urals produce iron ore, gold, platinum, copper, coal, asbestos, chromate of iron, manganese, iron pyrites, and rock salt. S Russia has coal, rock salt, manganese, china-clay, phosphates, and mercury, and iron smelting is carried on. Poland has coal and iron, iron smelting and manufacture, tin, zinc, sulphur, and salt. Central Russia has iron, coal, iron pyrites, phosphates, and asphalt. Northern Russia has iron, and sea salt. S E Russia has sea salt. The Caucasus has naphtha, manganese, silver-lead, zinc, and copper ores, sulphate of soda, and coal; and there is copper smelting and production of sulphur. Western Siberia has gold, silver-lead, and copper ores (all of which are smelted, as well as iron), salt, sulphate of soda, and coal. Eastern Siberia has gold, coal, graphite, silver-lead, and salt, and iron-smelting. The Trans-Caspian has copper, and salt. Turkestan has silver-lead, coal, naphtha, and sedimentary salt; and Fin-

land, iron, gold, silver, and copper—the two last being smelted. The total value of pig-iron produced is over £10,000,000, of the naphtha, coal, and gold, from £4,000,000 to £6,000,000 each, and of the salt, copper, platinum, manganese, and zinc, from £700,000 to £100,000 each. The coal output is now some 14,000,000 tons, of which 70 per cent come from the Donetz basin (which covers an extent of 212 by 100 m), 29 per cent from Poland. The export of naphtha is now well over 400,000,000 gallons, of which more than 80 per cent are for illuminating purposes, and there is an export of 48,400 cwts of vaseline. The bulk of this goes to Great Britain, Germany, and France; which countries, with Germany first, also take the lubricating oils. Egypt, India, Persia, China, and Japan also take illuminating oils. The forests consist largely of firs and pines (North Russia, and Siberia), birch, aspen, larch, oak (Western Russia, Tula, Nijni Novgorod, and Ufa), beech (Poland, Bessarabia, Crimea, and Caucasus), alder, lime, elm, ash, plane, willow, and walnut. The wood export is valued at over £5,000,000, of which £1,300,000 goes from Riga, mostly to Great Britain. The other chief timber ports are St Petersburg, Cronstadt (both about £1,000,000), Archangel, Odessa (oak, fir, pine), Novorossiisk (oak, fir, pine, larch), Batoum, and Poti. There are also saw-mills; manufactures of furniture, bent-wood furniture, and wood-pulp, manufactures of cottons and cotton yarns, and dye- and print-works (Moscow, Vladimir, and St Petersburg), making of carpets and other woollens (Moscow, Kieff district, Warsaw), linens, ropes and cordage, silks and silk embroidery (Moscow), iron and steel (Tula, Moscow, Warsaw, Kazan), cutlery (Nijni Novgorod, Tula, and Zlatoust), metal wares (Tula), samovars (Moscow, St Petersburg, Tula), paper, leather, boots and shoes, &c.

*Trade*.—The imports are valued at some £58,000,000, and the exports at some £70,000,000, over 50 per cent of the former being raw materials and half-worked articles, nearly 30 per cent manufactured articles, and some 17 per cent food-stuffs. Of the exports over 58 per cent are food-stuffs, 35 per cent raw materials and half-worked articles, and only 4 per cent manufactured articles. The chief exports have been already noticed in connection with the products and resources of the whole over 27 per cent go to Germany, over 20 to the United Kingdom, and 9 each to France and Holland. Of the imports over 37 per cent come from Germany, 22 from the United Kingdom, 7½ from the United States, and 5½ from France. The chief articles brought in are machinery and raw cotton (each between £8,000,000 and £5,000,000), coal, raw metals, metal goods, tea, wool and woollen yarn, gum and resin,

cotton and other textiles, leather (and hides and skins), raw silk and silk yarn, fish (herring, &c.), potables (wines, ales, and spirits), chemicals, colours, and fruits (including vegetables and nuts). The imports from Russia to Great Britain (total value over £21,000,000) are chiefly sawn timber, oats, barley, flax and tow, petroleum or naphtha, butter, and eggs (all between £5,000,000 and £1,000,000); hewn timber, wheat (varying greatly, up to £4,000,000), oil-seed cake, maize, linseed, hemp and tow, staves, horses, bristles, peas, paper and wood pulp, poultry and game, goat-skins, and manganese ore (all between £1,000,000 and £100,000). The exports of British produce to Russia (total value £10,000,000) are chiefly coal, machinery, and iron (wrought and unwrought)—all between £2,000,000 and £1,000,000; herring, wool, woollen and worsted yarn (including alpaca and mohair), cottons and cotton yarn, implements and tools, copper wrought and unwrought, lead (pig and manufactured), and chemicals—all between £1,000,000 and £100,000, while there is a re-export of foreign and colonial goods to the value of over £3,000,000, 40 per cent. raw cotton, 24 croutchouc, and a considerable amount of tallow and stearine, oil-seeds, jute, machinery, implements and tools, &c. Some 17,000,000 tons enter and clear in the foreign trade, and 20,000,000 in the coasting trade; of the former about 27 per cent. are British. The mercantile marine of Russia itself consists of 634,000 tons. There are British consuls-general at St Petersburg, Odessa, and Warsaw, consuls at Batoum, Helsingfors, Kieff, Moscow, Riga, and Taganrog, and vice-consuls at all the important centres. Mails from and to London twice daily, letters, 2½d per half-oz., postcards, 1d., parcels, *via* Ham-

burg, under 3 lbs., 2s.; between 3 and 7, 2s. 6d.; between 7 and 11, 3s., *via* Belgium and Holland, 3d. more in each case; telegrams to European Russia, 5½d. a word; to Asiatic Russia, 1s. to 1s. 3d.

Money, &c.—The coin of account is the silver rouble=100 kopecks—a little over 2s.; but officially 0.16 rouble=20k. A verst=two-thirds of a mile; arshin=3 arshins=7 ft., arshin=16 verchok=28 in.; square verst=0.1391 square m.; desyatina=almost 27 acres; pound=32 lot=nine-tenths lb. avoird.; pood=36 lbs.; vedro=8 shetoffs=2½ gallons; chetvert=5 chetverts=6.77 bushels. The Russian merchant flag has three horizontal bars—white above, blue in the centre, and red below. The imperial standard is yellow with the black double-headed imperial eagle, crowned and bearing on its breast the red imperial shield with St George and the Dragon. The naval ensign is white with a blue St. Andrew's cross.

Rustchuk, a town of Bulgaria, on the Danube, 11 m S by W. of Bucharest; manufactures of earthenware, and gold and silver ornaments. British vice-consul Pop. 33,000.

Rutherglen, a town of Lanarkshire, Scotland, on the Clyde, 3 m by rail S.E. of Glasgow, with coal, iron, and brick clay, in neighbourhood; chemical works, dye works, tube works, paper making, &c. Pop. 17,220.

Rybinsk, a town of Russia, on the Volga, 50 m N.W. of Jaroslavl, and 395 by rail E.N.E. of St. Peter-burg; having also canal communication with the Neva it is a centre of transit for goods between the Volga and St. Petersburg—grain, flour, timber, salt, tallow, metals, &c. Pop. 25,500, increasing in the trading season, during the summer months, to over 90,000.

## S

Saar, a river of Germany, flowing from Lorraine to the Moselle, with a course of about 88 m, of which over 40 are navigable, and over 30 have been canalised so as to effect communication by means of the Saar Canal (40 m, and over 5 ft deep) with the Marne-Rhine Canal.

Saarbruck, a town of the Rhine province of Prussia, on the Saar, 40 m S.S.E. of Treves, in the centre of a great coalfield of over 160 square m, with iron works, glass works, manufactures of chemicals, door and window fastenings, &c. Pop. 23,500.

Sacramento, a town of California, United States, on a river of same name, 90 m by rail N.E. of San Francisco; works of the Southern Pacific Railway, manufactures of flour, furniture, pottery, woollens, &c. Pop. 29,500.

Saffi, a port on the W coast of Morocco, about 100 m W.N.W. of Morocco, anchorage

in 15 fathoms; imports cottons, refined sugar, and general goods; exports beans, sheep-skins, maize, wool, olive-oil, seeds, &c. Of 150,000 tons entered and cleared nearly half are British. Regular communication from London. British vice consul Pop. 12,000.

Saginaw, a town of Michigan, United States, on a river of the same name, 108 m by rail N.W. of Detroit, with a trade in lumber and salt, saw mills, manufactures of joiner work, flour-milling, and salt works. *Saginaw Bay* with a length of 60 m, and a width of about 30, is one of the largest inlets from Lake Huron. Steamers of 10 ft draught can sail up the river for over 20 m. Pop. of town, 42,600.

Saigon, a port of French Indo-China, on a river of the same name, 34 m up, vessels of the largest size can reach the town, and the floating dock has an extreme depth of 20 ft of water on the sill, most important harbour.

between Hong-Kong and Singapore Imports coal, cottons, and general goods, exports rice to the value of over £1,500,000, hides, pepper, cotton, timber, fish, salt, and bones Of a total entered and cleared of over 1,000,000 tons, about 20 per cent. are British bottoms Regular communication from London, Liverpool, and Glasgow British consul. Pop about 200,000

**St Albans**, a town of Hertfordshire, England, 24 m by rail N N W of London, with some small manufactures of boots and shoes, and straw-plait Pop 16,019

**St Brieuc**, a town of the department of Côtes-du-Nord, France, on the Gouet 2 m up from St Brieuc Bay, 35 m. W by S of St. Malo, with regular communication every week with Plymouth and the Channel Islands Harbour takes vessels up to 14 ft and there is a dock at Le Légué at the mouth of the river with 23 ft on the sill at ordinary spring tides, iron and steel manufactures, agricultural implements, oysters, imports (£90,000), coal, coffee, timber, and artificial manures, exports (£60,000), butter, onions, eggs, potatoes, beans, pit-props, &c., 65 per cent of trade with United Kingdom, and 32 per cent of 50,000 tons entered and cleared are British. Pop 22,500

**St Christopher**, or **St Kitts**, one of the Leeward West India Islands, belonging to Great Britain, with a length of about 23 m, and a width of about 5, the surface is everywhere rugged, and rises in the N W. to a height of 4100 ft, mean temperature varies from 78° to 85° Fahr, and the rainfall is about 40 in. The imports (total value about £135,000, of which over £50,000 come from the United Kingdom, and over £16,000 from British Colonies) are mostly general goods; the exports (total value about £140,000, of which about £4000 go to the United Kingdom, and about £35,000 to British Colonies) are chiefly sugar, molasses, rum, tobacco, and salt Area, 65 m Pop 30,000

**St. Denis**, a town of the department of Seine, France, on the Seine, 2 m outside Paris, on the N, with print works, and manufactures of flour, and white lead and other chemicals Pop 61,000

**St. Étienne**, a town of the department of Loire, France, on the Furens (a small tributary of the Loire) 6 m up from its mouth, and 35 m by rail S W of Lyons, in the centre of a very large coalfield, with a trade in coal, and with manufactures of silk and velvet ribbons, fringe, lace, and other trimmings, &c, iron and steel goods, fire-arms, cannon, railway plant, ships' castings and forgings, cutlery and edge tools, nails, locks, files, hemp, cables, paper, rubber goods, chemicals, &c Pop 147,000

**St Gall**, a canton of northern Switzerland, S of the Lake of Constance. Embroidery of cottons and muslins, and spinning and

weaving of cotton, print works; iron and coal, forests in S, cattle rearing The chief town, of the same name, on the Steinach, 53 m by rail E of Zurich, turns out large quantities of embroidered cotton and muslin, and has bleach works, and manufactures of yarn, and leather. Area of canton, 779 m Pop 250,500, pop of town, 33,500

**St Helena**, an island in the S Atlantic, 1700 m N W of Cape Town, 680 m S E of Ascension, 2700 S S E of Teneriffe, and 4477 from Southampton, 10½ m long, by 6½ wide, coast formed mostly by cliffs from 600 to 2000 ft in height, and the extreme height of the surface is over 2820 ft The chief town Jamestown, on the N W, is an Imperial coaling station, and supplies are furnished to many of the whaling vessels that visit the Antarctic The only industries at present are the production of potatoes, and fishing along the coast, but an industry might be established in connection with flax and other fibre plants Regular communication with Great Britain and South Africa, the former being reached in 17 days, and the latter in 6 Mails to and from London every month, letters, 1d per half-oz, postcards, 1d, parcels, under 3 lbs, 1s, between 3 and 7, 2s, between 7 and 11, 3s, money orders to and from, telegrams, 3s a word, letters, 15 days, parcels, 17 days Area, 47 m Pop (including troops), 5000, pop of Jamestown, 2500

**St. Helens**, a town of Lancashire, England, 12 m E N E of Liverpool, and with canal communication with the Mersey, coal centre, with great glass works, smelting of copper and iron, and manufacture of alkali and fire-clay goods Pop 84,410

**St John**, the chief town of New Brunswick, Canada, on the N side of the estuary of the St John River, 275 m by rail N W. of Halifax, and 481 from Montreal, harbour has 18 ft on the bar at low water and there is a depth at the inside anchorage, opposite the town, of from 7 to 20 fathoms, and at the quays of from 21 to 30 ft Imports British and colonial produce of all kinds, exports timber, sawn wood and wood-pulp, grain, cattle, cheese, apples, fish, and lime Great trade in lumber, and shipbuilding, and fishing are important industries, manufactures of cottons and woollens, paper-pulp, leather, locomotives and other machinery, agricultural machinery and implements, boots and shoes, &c The river is navigable for large vessels for 80 m up, as far as Fredericton, and for smaller vessels for over 220 m Regular communication from Liverpool Distance from Halifax, and from Portland (Maine), 230 m Pop of town, 41,000

**St John's**, the chief town of Newfoundland, on the Avalon Peninsula, in the extreme E of the island, the nearest port to Europe, about 1680 m. W of Cape Clear and 2020 from Liver-

pool The harbour has a depth of 8 fathoms at ordinary high water, and 7 fathoms at low water, and vessels of 30 ft draught can lie alongside quays Imports coal, iron, lumber, cattle, and general goods, exports fish, seal-skins, fish and seal oil, and copper ore. Oil refining, tanning, and making of boots and shoes Regular communication from Liverpool Distance from London, 2200 m, Liverpool, 2130, Glasgow, 2240 Pop 29,000

St Joseph, a city of Missouri, United States, on the E bank of the Missouri, 68 m by rail N N W of Kansas City, great railway and distribution centre with maize, fat cattle, meat-packing, manufactures of iron and hardware, waggons, furniture, woollens, ready-made clothing, &c British vice-consul Pop 103,000

St Julien, a village in the department of the Gironde, France, 2 m S S E of Pauillac, noted for its claret

St Lawrence, a great river of Canada, carrying off the surplus waters of the Great Lakes, and so of a drainage basin of 298,000 m The length of the river itself is some 750 m, from Lake Ontario to its opening into the Gulf of St Lawrence, but it gives access to a navigation of some 2200 m to the head of the Lakes, along which sea-going vessels of over 2000 tons can now make, by river, lake, and canal, uninterrupted voyage on the way to and from foreign countries, while the depth up to Montreal (practically 27½ ft) gives passage for vessels of 4000 tons. The chief tributaries from the N are the Ottawa, the St Maurice (at Three Rivers, the highest point to which the tide reaches), the Saguenay, the Portneuf, the Betsiamites, the Bustard River, and the Manicouagan, and from the S the Richelieu from Lake Champlain, and the Chaudière opposite Quebec The width varies from three-quarters of a mile to an average of over 10 m for some distance below Quebec, and then gradually increases to 30 m, and finally to 70 at the junction with the Gulf, N of the Gaspé Peninsula The river becomes salt, and the estuary begins, about 130 m up from the Gulf Quebec is 300 m from the mouth of the estuary, and Montreal 480 The river is frozen during winter months The Gulf (greatest length and breadth about 280 m), shut in by Newfoundland and Nova Scotia, opens into the Atlantic north-eastward by the Strait of Belle Isle, and south-south-eastward by the openings between Cape Breton Island and Newfoundland, and between Cape Breton Island and the mainland of Nova Scotia (Canso Gut) It has very productive fisheries, but the navigation requires great care owing to the fogs and currents

St Lô, a town of the department of Manche, France, 60 m by rail S E of Cherbourg, with manufactures of woollen yarn, flannel and other woollens, lace, ribbons, paper, &c Pop 12,000

St Louis, a town of Missouri, United States,

on the Mississippi, most important commercial place in the Mississippi basin, 20 m below the junction of the Missouri, 700 m up from New Orleans, and 1100 m by rail W S W. of New York, and 2435 E. of San Francisco; on the Union Pacific Railway, great trading centre both by railway and river; total trade valued at over £120,000,000 a year, and the manufacturing product at nearly £50,000,000 The annual sales of dry goods and kindred lines are valued at £21,000,000; groceries and kindred lines, £15,000,000; boots and shoes, £10,000,000; tobacco and cigars, £8,200,000—the place being the leading tobacco market of the world, 26 per cent. of whole United States, 100,000,000 lbs of tobacco and 275,000,000 cigars; lumber, and drugs and kindred lines, each £8,000,000, hardware, £7,000,000, furniture, &c., and electrical machinery and supplies, each over £6,000,000; agricultural machinery and vehicles, railroad and street cars, beer, iron and steel and wagon material, wool, wooden ware, and hides, between £4,000,000 and £2,000,000 each, and clothing, paints and oils, saddlery and harness; hats, caps, and gloves, glass, glassware, and queensware, bricks, terracotta, and clay products, paper, stationery, and envelopes, carpets and kindred lines, and candles, all about £1,000,000 each Letters, 9 days British vice-consul Pop. 621,000

St Lucia, the most northerly and largest of the British Windward Islands, West Indies, 21 m N E of St Vincent, extreme length, 24 m, extreme breadth, 12; surface hilly, rising to about 3000 ft, and covered with forests; healthy, the fresh trade wind keeping down the temperature The forests produce many kinds of timber suited for cabinet work, and logwood; and though less than one-third of the surface is cultivated there is considerable production of sugar, cacao, and spices, and ginger, rice, and tobacco are being tried The chief town Castries, on the N W coast has an excellent harbour with a depth of from 18 to 27 ft. at the quays, and its convenience has made it an Imperial, as well as a commercial, coaling station Imports coal and general goods to the value of some £400,000, of which more than half comes from the United Kingdom, and more than a quarter from British colonies. The exports have a total value of £220,000, of which about one-tenth goes to the United Kingdom, and about one-fortieth to British colonies Of this total more than half is for bunker coal, shipped at Castries The sugar goes largely to the United States Of nearly 2,000,000 tons entered and cleared over 80 per cent are British Mails from and to London every fortnight, letters, 1d per half-oz, postcards, 1d, parcels, under 3 lbs, 1s, between 3 and 7, 2s, between 7 and 11, 3s; telegrams, 4s 6d a word, letters, 13 days, parcels, 14 Regular communication from London and

Southampton Area, 333 m. Pop 50,000, pop of Castries, 8000

St Malo, a port of the department of Ille-et-Vilaine, France, at the mouth of the Rance, 51 in by rail N.N.W. of Rennes The conjoint docks of St Malo and St Servan have a depth of water of 25 to 28 ft. on the sill at high water of ordinary spring tides, and of 13 to 16 ft at neap tides, and the tidal harbour which is dry at low water has a depth of about 30 ft at high water, fishing centre, some 60 to 90 vessels averaging 100 tons being fitted out every year for the Newfoundland fishing, imports coal, timber, iron, salt-fish, flax, hemp, pitch, manures, and general goods, exports barley, buckwheat, potatoes, eggs and butter, fruit, wine and brandy, cider, meat, cauliflowers, chestnuts, mistletoe, slate, &c. There is a small manufacture of lace Of nearly 500,000 tons entered and cleared over 75 per cent are British. Regular communication with Southampton, Hull, Liverpool and Jersey British vice-consul Pop of St Malo, 11,500, St. Servan, 12,500

St. Margaret's Hope, a fine anchorage on the Fife coast of the Firth of Forth, to the W of the N end of the Forth Bridge, British naval base for North Sea

St Nazaire, a port of the department of Loire-Inférieure, on the estuary of the Loire 40 m by rail, or 30 by river, W. by N. of Nantes, roadstead with from 4 to 7 fathoms at low water, and two docks with an extreme depth of 30½ ft at the highest spring tides, and of 22 ft at the lowest neaps Imports coal, wine, spirits, iron ore, timber, pitch, coffee and cocoa, lead and other metals, hemp, &c, exports coal, wine and brandy, wheat and flour, sardines, butter and eggs, bone-dust, poultry, vegetables and dried fruits, pit-props, toys, &c. The total trade has a value of about £8,000,000 Of nearly 2,000,000 tons entered and cleared some 40 per cent. are British Some shipbuilding, iron founding, sail-making, &c Regular communication from London Parcels, 2 days 2 hours. British vice-consul Pop 36,000

St Nicolas, a town of E Flanders, Belgium, 12 m by rail W by S of Antwerp, with a trade in flax, and manufactures of woollens, and cottons, hosiery, lace, pins and needles, pottery, &c. Pop 30,500

St Omer, a town of the department of Pas-de-Calais, France, on the Aa, 26 m by rail S E of Calais, with refining of sugar, distilling, making of tulles, cambrics, muslins, &c.; oil-refining, and salt works Pop 21,000.

St. Paul, the chief town of the state of Minnesota, United States, on the Mississippi near the junction of the Minnesota River, at the head of steamboat navigation, about 2100 m from the mouth of the Mississippi, 410 m by rail W N.W of Chicago, and close to Minneapolis, important railway and transit centre

for the upper part of the Mississippi basin and the whole of the Red River Valley to the N W., trade valued at over £50,000,000, industrial output valued at over £20,000,000—packing of beef, pork, provisions, and poultry (£3,000,000), butter making (£2,400,000). British vice-consul Pop 163,000

St Petersburg, the chief town of Russia, at the head of the Gulf of Finland, and at the mouth of the Neva, which has here a depth of about 60 ft; river frozen for about 147 days yearly, for ship canal *see* Cronstadt, imports coal and coke, herring, raw cotton, wool, wrought and cast iron, steel, machinery, tea, coffee, wine, spirits, beer, &c, exports oats, rye, wheat, peas, buckwheat, butter, eggs, linseed, oil-cake, flax, hemp, bristles, wool, hair, goat and calf skins, mineral oils, deals, lath-wood, pit-props and other kinds of timber, pulp-wood, crushed bone and bone meal, and pitch, trade about 15 per cent of whole foreign trade of Russia Of some 1,500,000 tons entered and cleared about 34 per cent are British Regular communication from London, Hull, the Tyne, Leith, and Manchester. Distance from Copenhagen, 700 m, London (rail, &c), 1728 Time for noon at Greenwich 2½ P.M. Letters, 2 days 15 hours, parcels, 5 days. British consul-general Pop 1,439,500.

St. Pierre, a small island belonging to France, off the S. coast of Newfoundland, cod fishing. Mails as for Nova Scotia, letters, 2½d per half-oz, postcards, 1d, telegrams, 1s a word *See* Miquelon. Area about 10 m Pop about 600, but increases enormously during the fishing season.

St Quentin, a town of the department of Aisne, France, on the Somme, 95 m by rail N E. of Paris, with manufactures of cottons, woollens, mixed woollen and silk, jaconet, tulle, cretonnes, muslins, merinos, cashmeres, barege, table-linen, &c, the making of embroidery, and hats, sugar refining, tanning, and the manufacture of paper The *Canal of St. Quentin* (58 m long, 7 ft deep) gives communication between the Oise, the Somme, and the Scheldt. Pop 50,500

St Ubes *See* Setubal

St Vincent, one of the Windward Islands, British West Indies, 21 m S W of St Lucia, and 100 m W. of Barbados, about 18 m long, and 11 m extreme width, volcanic, and everywhere mountainous, reaching in the N in the Soufrière some 4000 ft, and in Mount St. Andrew in S 2500 ft The Soufrière was dormant from 1812 to 1902, when it broke out in violent eruption and laid waste the whole of the northern third of the island Temperature ranges from 67° Fahr to 88°, and the nights are always cool, even wet season, from August to November, is not unhealthy; rainfall about 107 in Timber trees from densely wooded hills, production of arrowroot, cocoa, sugar, and rum Imports (total value over

£90,000 of which the United Kingdom sends well over one-third, and British colonies the same), textiles, timber, provisions, and general goods, exports (total value over £90,000, of which some four-fifths are for arrowroot) products as noted, cassava, starch, and live stock and poultry. About 70 per cent. go to the United Kingdom. Of some 300,000 tons entered and cleared 90 per cent. are British. The chief town is Kingstown, in the S W, with a pop of 4000. Regular communication from London. Mails from and to London every fortnight, letters, 1d per half-oz, postcards, 1d, parcels, under 3 lbs, 1s., between 3 and 7, 2s.; between 7 and 11, 3s.; telegrams, 4s 7d a word, letters, 13 days, parcels, 14 days. Regular communication from London. Area, 147 m. Pop 46,000.

Sajo, a tributary of the Theiss, Austria-Hungary, with, along the upper part of its course, a very important iron-mining district.

Salem, a town of Madras, India, 120 m. by rail S W of Madras, with manufactures of cotton, carpets, and cutlery, the excellent quality of the last being due to the working with charcoal. Pop 71,000.

Salem, a port of Massachusetts, United States, 16 m. by rail N N E of Boston, with manufactures of cotton, leather, jute, ironware, lead pipes, boots and shoes, &c. Pop 36,000.

Salerno, a port of Campania, S Italy, on the Gulf of Salerno, 33 m. by rail S E of Naples, with growing of lemons and oranges, and manufactures of cotton, macaroni, leather, iron, and glass, and making of olive-oil. British vice-consul. Area, 4863 m. Pop 45,000, pop. of town, 12,000.

Salonica, a port of Turkey, chief town of a province of the same name, on a gulf of the same name opening off the N W corner of the Aegean Sea, with railway communication to Nisch (286 m), on the Constantinople-Buda-Pesth Railway, and 372 m. by rail S S E of Buda-Pesth. Anchorage in 5 to 7 fathoms, about half a mile off shore, vessels of 10 to 12 ft. can lie alongside quay. Imports (total value £2,500,000—about one-fifth from the United Kingdom), cotton piece-goods and yarn, prints and shirtings, woollen cloth, linen yarn, silk, oil-cloth, coal, iron and machinery, tin-plates, ironware and hardware, tobacco, hides, leather, earthenware, linseed and cotton-seed oil, flour, rice, fruits and vegetables, coffee, drugs, furs, paper, petroleum, salt, and sugar, exports (total value about £1,500,000—about one-seventh to the United Kingdom), grain, furs and skins (almost all to America and Germany), opium, manganese, tobacco, cocoons, cotton, cattle, barley, wheat, poppy-seed, rye, flour, oats, wool, &c. Of a total tonnage of about 1,500,000 entered and cleared some 30 per cent are British. There are manufactures of cotton, flour, carpets, silk, leather, &c. Mails from and to London every day, parcels under

3 lbs, 2s; between 3 and 7, 2s. 6d., between 7 and 11, 3s.; money orders to and from. Regular communication from London and Liverpool. Distance to Constantinople, 335 m. The bay has a length of some 10 m, with a width at the mouth of about 3 m, and a depth of 16 fathoms. British consul-general. Area of province, 13,684 m. Pop. 1,165,500; pop of town, 105,000.

Salta, a province in the N.W. of the Argentine Republic, with a chief town of the same name, plateau sloping to the S E., and drained by the Bermejo and other streams, rearing of cattle and horses, deposits of gold, silver, coal, petroleum, copper, salt, &c., practically unworked, exports of leather, wool, cheese, &c. Area of province, 62,184. Pop 132,000, pop of town, 18,000.

Saltare, a village of the West Riding of Yorkshire, England, on the Aire, 3 m. by rail N N W of Bradford, with a large alpaca factory. Pop 4800.

Salt Lake City, the chief town of Utah, United States, on the Jordan, 11 m. from the Great Salt Lake, and 833 m. by rail from San Francisco, with manufactures of glass, woollens, paper, cutlery, pottery, &c. Pop 53,500.

Salto, a town in a department of the same name in the N.W. of Uruguay, at the head of the navigation on the Uruguay River, 300 m. up from Buenos Ayres, and 85 m. by rail N of Paysandu, with a considerable transit trade. The department has cattle-rearing. British vice-consul. Area, 4863 m. Pop 45,000, pop. of town, 12,000.

Salt Range, two chains of hills in the Punjab, India, running eastward from the Indus to the Jhelam, with a height of from 3000 to 5000 ft, and a tableland between; large deposits of rock-salt, and a considerable amount of lignite.

Salvador, a small state of Central America, with a length of about 190 m, and a width of about 50, between Honduras on the N E and the Pacific on the S W, surface plateau of from 1600 ft to 3000 ft, with hills rising above it to an extreme height of 7900 ft. Earthquakes frequent and severe. Mean temperature about 80° Fahr; the rainfall is not exceedingly heavy, and there is a dry season from October to April, with cool winds. Along the Pacific slopes there are large forests, with furniture woods, gums and resins, and medicinal plants, there are deposits of silver, gold, antimony, mercury, copper, zinc, coal, iron, and lead, which are worked to a considerable extent, chief products sugar, coffee, indigo, cacao, rubber, tobacco, &c. The imports (total value, £800,000) are cottons, iron-ware, silk and silk yarn, provisions, and general goods, exports (total value about £1,800,000) are coffee (more than two-thirds of the whole), indigo, balsam, silver, tobacco, and sugar. Of the imports the United Kingdom sends over

one-fourth, the chief articles being cottons and cotton yarn, iron, woollens, and sacks; and of the exports the United Kingdom receives about one-thirteenth, the chief articles being coffee and dye-stuffs. The government is a republic with a president and a congress of seventy deputies elected by universal suffrage for one year. The president is elected every four years. Mails from London every fortnight, return mails uncertain, letters, 2½d per half-oz.; postcards, 1d, parcels under 3 lbs, 3s 6d; between 3 and 7, 5s 3d; between 7 and 11, 7s.; money orders to and from, telegrams, 3s. 6d. to 3s. 9d a word. Area about 7300 m. Pop 1,007,000, of whom the most are of mixed blood or Indians.

**Salwen**, a large river of Indo-China, mostly in British Burma, but for a short distance touching the N.W. border of Siam, much used for bringing down logs of teak from the forests of the interior.

**Salzbrunn**, a district of Silesia, Prussia, 40 to 50 m S.W. of Breslau, with coal in neighbourhood, and manufactures of glass and china, and with mineral waters which are bottled and exported in considerable quantity.

**Salzburg**, a province of Austria-Hungary, on the border of Bavaria, with a chief town of the same name; surface almost entirely mountainous, reaching an extreme height of over 12,000 ft.; drained by the Salzach and smaller streams, about 40 per cent are woodland, and about 40 upland pasture where cattle and horses are reared in considerable numbers. There are large deposits of salt, and iron, copper, gypsum, gold, and marble are also found. The chief town on the Salzach, 80 m by rail E.S.E. of Munich, has some small manufactures of musical instruments and marble ornaments, &c. Area of province, 2767 m. Pop 193,000, pop of town, 33,500.

**Salzkammergut**, a district of Austria-Hungary, to the E. of Salzburg, with large deposits of salt, and important salt springs; some little trade in cattle and timber.

**Samara**, a province of S.E. Russia, with a chief town of the same name, in the basin of the Volga which has a course of over 500 m. along its border; forest-land and fertile prairie. The chief town, at the junction of the Samara River and the Volga, 656 m E.N.E. of Moscow, is an important river port, with a trade in grain, tallow, timber, salt, &c.; and with manufactures of leather, soap, and tobacco. Area of province, 58,321 m. Pop 2,764,000, pop of town, 92,000.

**Samarqand**, a province of Russian Turkistan, with a chief town of the same name, fertile soil yielding large grain crops, and also with vines, cotton, raw silk; manufactures of cottons, silk, leather and leather goods, &c. The town, 890 m by rail W. of the Caspian, does a large trade in the products of the country, and

has some cloth-weaving, and manufactures of leather and leather ware, &c. Area of province, 26,627 m. Pop 858,000; pop of town, 55,000.

**Sambre**, a river of France, flowing to the Meuse at Namur; navigable for barges, and with canal communication with the Scheldt and Oise.

**Samoa**, a group of islands in the Pacific, at the intersection of the parallel of 14° S and the meridian of 170° W., about 1620 m. N.N.E. of Auckland, New Zealand, and 2200 N.E. of Sydney. There are two large and two small islands belonging to Germany, and two large and six small belonging to the United States; surface mountainous, reaching an extreme height of 4300 ft. The temperature is between 80° and 92° Fahr, but the trade winds give freshness to the air. The rainy season is from November to April, when there are often very destructive hurricanes. Active volcanoes, and earthquake shocks at times. Cocoa-nuts, cacao, bananas, sugar, cotton, tobacco, and many different kinds of tropical fruits, imports general goods, and exports copra, cacao, bananas, citrons, kola, and vanilla. Mails from and to London every three weeks, or oftener by special route; letters, 2½d per half-oz.; postcards, 1d, parcels, *via* New Zealand, under 3 lbs, 2s; between 3 and 7, 3s, between 7 and 11, 4s, *via* Hamburg, 3s, 3s 6d, and 4s; money orders to and from, letters, 25 days. Of 63,000 tons entered and cleared 88 per cent. are British. British vice-consul. Total area a little over 9000 m. Pop estimated at about 33,000, of whom about 500 are whites.

**Samos**, an island of Greece, in the Aegean Sea, on the coast of Asia Minor, with a length of about 30 m and an average width of about 8, about 45 m. S.W. of Smyrna; mountainous, reaching an extreme height of over 4700 ft., with fertile valleys, hills covered with timber, and there are deposits of iron-ore, silver-lead, emery, ochre, and white marble, vines are grown, and wines produced, as well as olive-oil, mastic, and locust beans, manufactures of leather, imports (total value about £200,000), hides, provisions, and general goods, exports (total value about £200,000), wine, olive-oil, locust beans, raisins, tobacco, leather, &c. Area, 180 m. British consul. Pop 55,000.

**San Diego**, a town of California, United States, 125 m by rail S.S.E. of Los Angeles, with a land-locked harbour 5½ m long, in which there is safe anchorage for any size of ship, depth on bar 22 ft. at low water, and with 18 to 35 ft at low water alongside quays; imports (£130,000—British Empire one-third), coal, cement, silk, and provisions and general goods, exports (£250,000), cotton, machinery, lime and cement, iron and steel manufactures, and beet. Of 330,000 tons entered and cleared 142,000 are British. British vice-consul. Pop 18,000.

**San Domingo**, the chief town of the republic

of San Domingo, on the S coast of the island of Hayti, gold in neighbourhood, anchorage about half a mile out, much exposed, harbour takes vessels up to 13½ ft; imports general goods, exports mahogany, lignum vitæ, sugar, and wax. Regular communication from Liverpool. British vice-consul. Pop. about 20,000.

**Sandusky**, a town of Ohio, United States, on the S shore of a bay of the same name, 15 m. long and 5 wide, opening off Lake Erie, 65 m by rail W of Cleveland, great trade in fresh fish, salt, coal, ice, wool, gypsum, lime, wheat and flour, and wine, manufactures of wood ware, railway cars, machinery, cutlery and tools, &c. Pop 20,000.

**Sandwich Islands**. See Hawaii.

**Sandy Hook**, a sandy point of New Jersey, United States, 16 m S of New York, and standing out about 6 m at the mouth of the lower bay of New York harbour, the main entrance to which is immediately to the N.

**San Francisco**, a great port and commercial centre of California, United States, standing at the point of a peninsula, some 30 m long and 6 to 20 broad, separating San Francisco Bay from the Pacific, with San Pablo Bay stretching about the same distance to the N, and with the mile wide opening of the Golden Gate giving access westward to the Pacific, 5 m away, 2452 m by rail W of New York, and 2434 W of St Louis, extensive shipping trade with the W coast of America, China, Japan, Australia, and New Zealand, never less than 28 ft. of water on the bar, dry docks, 210 to 493 ft. The total imports are valued at from £12,000,000 to £13,000,000, of which about £4,000,000 are treasure. Of the remainder the leading articles are raw silk (over £2,000,000), coffee, coal, tea, rice, cement, sugar, tin-plates, pig-iron, earthenware, china, linens, woollens, whisky, beer, stout, and jam. Of these the United Kingdom sends only about 8 per cent—coke, tin-plate, earthenware and china, linens, woollens, whisky, beer and stout—the leading sending countries being Japan, China, Hawaii. India sends rather more, Canada rather less, than the United Kingdom. The exports are valued at about £10,500,000, of which more than £2,500,000 are treasure. Of the remainder the great articles are wheat and flour (£2,750,000), and after these, but a long way after, come tinned salmon, barley, tinned fruits and vegetables, timber, wine, dried fruit, quicksilver, hops, brandy, copper, wool, hides, oats, onions, beans, potatoes, tallow, &c. Of the exports the United Kingdom is the biggest buyer, with about 36 per cent, and Hawaii next with about 15, while China, Japan, and Australasia take each between £1,000,000 and £500,000. Wheat goes largely to the United Kingdom, flour to China and Central America, the tinned salmon and tinned fruit and vegetables to the United Kingdom

and Australasia, dried fruit to British Columbia and Australasia. A great deal of wine is sent to the eastern United States, while of foreign purchasers the United Kingdom, Central America, and Mexico hold the chief places. Quicksilver goes to Mexico and Central America, and hops to Australasia. Of over 2,600,000 tons entered and cleared nearly 35 per cent are British. Ships are fitted out for the Arctic whaling, and there are ship-building yards, rolling-mills, foundries, machine shops, beet-sugar making and refining, tannings, brewing, making of boots and shoes, &c, the annual value of production being estimated at over £25,000,000. Time for noon at Greenwich 4 23 A.M. Regular communication from Liverpool. Distance from London, 13,670 m, Liverpool, 13,600; Glasgow, 13,700. British consul-general. Pop 343,000, of whom 20,000 are Chinese, mostly men, who live in a special Chinese quarter.

**San José**, a town of California, United States, 50 m by rail S E of San Francisco, and 8 m inland, with a great many fruit gardens in the district, and manufactures of wines and woollens, fruit canning, and a trade in dried fruit. Pop 21,500.

**San Juan**, the chief town of Porto Rico, on the N. coast, harbour entered by a winding and difficult channel with 38 ft. at entrance, 24 ft at quays, imports salt-fish, salt-meat, machinery, timber, cotton and linen piece-goods, provisions and general goods, exports sugar, molasses, rum, coffee, tobacco, maize, and cattle. British consul. Pop. 32,000.

**San Luis**, a central province of the Argentine Republic, gold and copper are worked, and there are deposits of black-lead, pyrites, sulphur, copper, lead, &c. The chief town, of the same name, is on the trans-continental line from Buenos Ayres to Valparaiso; 480 m by rail W by N of Buenos Ayres. Area of province, 28,535 m. Pop 91,500, pop of town, 10,000.

**San Luis Potosi**, a state of central Mexico, with a chief town of the same name; mountainous, with important mining of gold, iron, lead, mercury, and salt. The town, 362 m by rail N N W of Mexico City, has silver-smelting, railway workshops, and some little manufacture of cotton. Area of state, 25,316 m. Pop 582,500, pop of town, 69,500.

**San Paulo**, a state of S Brazil, with a chief town of the same name, with a coast-line of 300 m, and extending inland to the River Paraná, great forests, coal, iron, gold and silver, marble, &c, large cultivation of coffee, and considerable crops of sugar-cane, cotton, tobacco, maize, and grapes for wine. The chief town, 40 m. by rail N W of Santos, is an important railway centre, with a great trade in cotton, cotton factories and print works, and manufactures of tobacco, gloves, matches, &c. Area

of province, 112,280 m Pop. 1,385,000 ; pop. of town, 65,000

San Salvador, the chief town of the republic of Salvador, Central America, with a considerable trade in coffee British consul Pop. 59,500

San Sebastian, a port of N Spain, about 11 m from the French frontier, and 48 m. E by N of Bilbao, with which there is railway communication, depth at entrance 18 ft at high water of spring tides, and 11 ft. at high water of neap tides ; large vessels load or unload outside (the anchorage on the W. being 3 to 5 fathoms), or at the port of Pa-ages some 2 m E, fishing industry Imports (total value about £700,000), coal, china-clay, metals, fish, yarn, and general goods—coal and china-clay from Great Britain, exports (total value about £1,200,000), wine (from 4,000,000 gallons to 12,000,000 gallons, of which a small proportion goes to the United Kingdom), iron, lead, and copper ore, asphalt, cement, wool, cloth, and matches, making of glass and bricks Regular communication from London and Glasgow British vice-consul. Pop 36,000

Santa Catharina, a coast state of S Brazil, surface sloping from the seaboard to a plateau in the interior, reaching a height of over 6000 ft, pasture and rearing of cattle ; coal, iron, and manganese, great tracts of forest, and cultivation of sugar-cane, cotton, coffee, vanilla, vines, &c, silk-worms, imports hardware, cottons, petroleum, flour, and cement British vice-consul. Area, 28,620 m Pop 320,000.

Santa Fé, an east-centre province of the Argentine Republic, with a chief town of the same name, surface flat, and drained by the Paraná River, which forms its eastern boundary, and its tributaries, exceedingly fertile soil, producing very heavy crops of wheat, maize, and flax, the wheat being specially important in connection with exports, cattle-rearing, good railway communication The chief town, on the Salado River, 7 m up from the Parana, is an important railway and trading centre, with exports of wheat, linseed, and quebracho Of 450,000 tons entered and cleared some 53 per cent. are British British vice-consul. Area of province, 50,916 m Pop 536,500, pop of town, 25,500

Santander, a province of N Spain with a chief town of the same name, mountainous, with fertile valleys, deposits of iron, copper, zinc, and lead, and manufactures of cotton, flour, paper, &c. The town, on an inlet of the Bay of Biscay, 48 m W by N of Bilbao, has a harbour in which vessels up to 19 ft can load or unload with safety at all states of the tide, imports coal, iron and steel goods, textiles, tobacco, machinery, dried cod-fish, petroleum, cocoa, timber, chemicals, &c, exports iron-ore, wine, preserved meat, fish, &c, and sardines in pickle Regular communication from London and Glasgow Distance from

Havre, 550 m, Pauillac, 250 Letters, 24 days. British vice-consul Area of province, 2113 m. Pop 264,000, pop of town, 51,000.

Santiago, the capital of Chile, in a province of the same name, on a plateau over 1800 ft above sea-level, at the western base of the Andes, 60 m in a direct line, but 115 m by rail, ESE of Valparaiso, copper-smelting, fruit-preserving, biscuit-making, ice-making, distilling of brandy, and a small manufacture of cloth British vice-consul Area of province, 5223 m Pop 416,000, pop of town, 256,500.

Santiago de Cuba, a port on the S coast of Cuba, on a bay 8 m long, with a depth of water at the entrance to the harbour of 28½ ft, and at the quays of from 14 to 26 ft. ; trade mostly with the United States, imports machinery, hardware, lumber, and general goods, exports iron and manganese ore, sugar, rum, cacao, coffee, tobacco and cigars, mahogany, cedar, dye-woods, honey and wax, and bananas and other fruits Distance from Aspinwall, 750 m British consul Pop 43,000

Santos, a port of San Paulo, Brazil, on a bay with a depth of 4 to 10 fathoms, entrance has a depth of 30 ft, and at quays there is a depth of 20 ft, imports cotton, petroleum, lumber, machinery, food-stuffs, and general goods ; exports coffee (three-fifths of whole quantity from Brazil), hides, rubber, and tobacco Regular communication from London and Southampton. British consul Pop 18,000

Saône, a river of France, flowing from the Vosges to the Rhone at Lyons, with a length of 290 m, of which about 180 are navigable The Canal de l'Est connects it with the Meuse and Moselle, the Marne Canal with the Marne, a branch of the Rhone and Rhine Canal with these two rivers, and the Canal du Centre with the Loire Area of basin about 9000 m

Saône, Haute-, a department of E France, plateau with an average height of from 800 to 1000 ft, forests occupy about one-third of the whole area, coal is found, as well as copper, manganese, iron, and salt, growing of fruit and tobacco, weaving and spinning of cottons and linens, and of woollens, manufacture of iron and steel, and iron and steel ware, glass, and paper Area, 2062 m Pop 267,000

Saône-et-Loire, a department of E France, large deposits of coal and iron, and manufactures of iron and steel goods (rails and sheet-iron), locomotives and other machinery, glass, cotton, &c The hill-slopes are covered with vines, and large quantities of Mâcon wine are made Area, 3302 m Pop 620,500

Saragossa, a town of Spain, on the Ebro, 212 m by rail NE of Madrid, and 228 W by N of Barcelona, agricultural centre, manufactures of woollens, silks, leather, and chocolate Pop 99,000

Sarajevo See Bosna-Serai.

**Saratov**, a government of S E Russia, with a town of the same name, soil fertile, producing flax and linseed, sunflowers, mustard, and other plants for oil-seeds, extensive river trade, and some manufactures of flour, leather, and oil, timber in N The town, 509 m by rail S.E of Moscow, has a trade in grain, iron, salt, wood ware, woollens, hides, wool, petroleum, provisions, &c., production of oil-seeds in the neighbourhood, fishing, distilling, and manufactures of flour, tobacco, and oil Area, 32,624 m Pop 2,420,000, pop of town, 137,500.

**Sarawak.** See Borneo

**Sardinia**, a large island in the eastern Mediterranean, belonging to Italy, from the mainland of which it is 120 m distant, and immediately S. of Corsica, from which it is separated by the Strait of Bonifacio (7 m), with a length of 170 m, and a breadth of 75, surface almost entirely mountainous plateau, reaching a height on the eastern side of from over 4200 to 6200 ft., almost equally divided between forest, arable land, and pasture, but very much more might be made of its natural wealth The forest products—apart from oak, olive, and other timber—include cork, tanning bark and acorns, and charcoal There is a large production and export of wine, and export of metals (90 per cent of whole, nearly £1,000,000—three-quarters to Belgium, and one-seventh to France), timber, cattle, and hides The leading metals produced (almost all in S half—total value over £1,200,000) are lead (Arbus, Guspini, and Iglesias), zinc (Fluminimaggiore and Iglesias), silver (Muravera), lignite (Gonnese), and blende. The imports (total value £250,000) are mainly food-stuffs, &c., earthenware, glass, and metal manufactures Of over 400,000 tons entered and cleared half is Italian, and one-fourth British, while there is an additional coasting trade of some 1,800,000 tons, mainly Italian but a small part British There is a considerable amount of fruit-growing—olives, oranges, lemons, tobacco, flax, and hemp, and cattle, sheep, and goats are reared for food and export, as well as for butter, cheese, and wool Sea salt is made, there are tunny, sardine, anchovy, and coral fisheries, and manufactures of tobacco, gunpowder, wooden pipes, matches, macaroni, &c. Area, 9294 m Pop 789,500

**Sarthe**, a department of N W France, large production of hemp, and rearing of poultry; rearing of cattle, horses, and swine, apples, for cider, some coal-mining, manufactures of hemp and linen, machinery, copper, paper, and leather, bell-founding Area, 2396 m Pop 423,000

**Saskatchewan**, a district in the N W territories of the Dominion of Canada, extending northward from Assiniboia to the 55th degree of N latitude, along the border of Athabasca, and from Alberta on the W to Manitoba and the northern part of Lake Winnipeg on the E;

with an area of about 107,000 m A considerable part of the district is under wood, but the southern portion, traversed from W. to E. by the Saskatchewan River, has a considerable amount of good agricultural ground fit for settlement; the great drawback, meanwhile, is one of communication, the only railway being a branch of the Canadian Pacific from Regina in Assiniboia northwards to Prince Albert in the centre of Saskatchewan The soil and products are much akin to those of northern Alberta. The Saskatchewan River has a course of about 1100 m, of which about 700 are navigable, to Lake Winnipeg The basin is said to contain considerable deposits of coal and iron. Area of basin about 150,000 m Pop of district, 26,000

**Sassari**, a town in the N W. of Sardinia, 12 m by rail inland from the Gulf of Asinara, with a trade in oranges, olive-oil, hides, and cheese British vice-consul Pop 40,000

**Satsuma**, a peninsula in the S W. of the Island of Kiushiu, S W. Japan, with manufactures of famous earthenware, see Kagoshima

**Sault Ste. Marie**, a town of Ontario, Canada, on the St. Marie River between Lake Superior and Lake Huron, near the S E corner of Lake Superior, 622 m by rail W. of Montreal; with a railway bridge giving connection with the United States lines on the opposite side of the river A short ship canal, with a length of a little over 1½ m, a depth of 22 ft, at least, at all ordinary times, and a surface width of 150 ft., is provided, for carrying vessels past the rapids on the St. Marie River; it is entered by a lock with a length of 900 ft., and a width of 60 There is also a canal on the United States side, with a depth of 21 ft, and the traffic through the two during the 240 days, or thereabouts, that they are open every year is very large, total number of tons of goods carried—principally wheat, flour, and iron-ore—about 31,000,000, with a total value of about £63,000,000 Manufactures of steel rails and paper-pulp Pop of town, 7500

**Saumur**, a town of the department of Maine-et-Loire, France, on the Loire, 178 m by rail S W. of Paris, with manufactures of tin-plate, tin-ware, enamels, and white wine Pop 16,500

**Savannah**, a port of Georgia, United States, on a river of the same name 18 m up, and 115 m by rail S W of Charleston, 19 ft. on bar at low water, and 26 at high water, and vessels of 19 ft. draught can reach the town at spring tides, imports kainite (from Germany), sulphur pyrites (from Spain and Portugal), fruit, and salt, exports (total value over £7,500,000), cotton (more than five-sixths of the whole), turpentine, resin, lumber, rice, cotton-seed, &c.; flour, rice, and paper, mills; cotton mills, &c., making of soap, lard, cotton-seed oil, and artificial manure Of 4,000,000 tons entered and cleared one-ninth is British.

Distance from New York, 690 m ; Boston, 900  
British vice-consul Pop 54,500

**Savona**, a port of Liguria, Italy, on the Gulf of Genoa, 26 m by rail W. by S of Genoa, depth at entrance from 25 to 26 ft, and alongside quays of 24 to 25 ft., imports coal, petroleum, iron and steel, grain, clay, chemicals, and general goods, exports staves, wooden hoops, tomato conserve, candied fruits, oil, cream of tartar, and terra-cotta ware, tiles, &c.; has iron and steel foundries, and manufactures of machinery, chemicals, pottery Of imports valued at about £1,800,000, goods to the value of over £1,000,000 come from the United Kingdom, of exports of £40,000 the United Kingdom takes 65 per cent. Of 1,200,000 tons entered and cleared nearly 50 per cent are British. British vice-consul Pop 38,000

**Saxe-Meiningen**, a state of central Germany, N of Bavaria, surface mountainous, with forests, mines of iron, coal, copper, marble, salt, &c, and manufactures of linens and woollens. Area, 953 m Pop 251,000

**Saxe-Weimar**, a state of central Germany, consisting of three detached districts and a number of smaller territories surrounded by other states, mountainous in W, drained by Werra, Ilm, Saale, and other smaller streams, rearing of cattle and pigs; crops of flax, hemp, &c, iron, salt, and coal, and manufactures of linens and woollens, glass and earthenware. Area, 1388 m. Pop 363,000

**Saxony**, a kingdom on the S border of the German Empire, bounded N and NE by Prussia, SE by Bohemia, SW by Bavaria, and W. by Reuss, Weimar, Altenburg, and Prussia, with an extreme length of about 130 m, a breadth of 70, and an area of 5787 The NW is flat, forming part of the great European plain, but from this the surface rises to the Erzgebirge, which lie along the Bohemian border where there is an extreme height of some 4000 ft. The drainage is mainly carried off by the Elbe which crosses the E, and by the Mulde and its tributaries in the W. The climate is severe for the position, especially among the mountains, and even at Dresden the mean temperature of January is about 31° Fahr, and of July about 65°. The government is a hereditary monarchy with a parliament consisting of an Upper Chamber and a

forest (mainly pine and fir), and two-thirds under cultivation, of which over 80 per cent. are arable, and 18 per cent pasture Apart from the ordinary food-crops there is considerable cultivation of flax, but the live stock are not numerous, and the sheep, for which and for wool the country was at one time famous, are now comparatively few The wealth of Saxony lies in its industries, which are spread all over the country, and of which the chief are textiles and machinery, cotton manufacture (spinning, weaving, dyeing, and printing) is centred at Chemnitz, Plauen, and Zwickau, and the largest metal and machinery works are at the same places, near Dresden, and at Bautzen, while cotton muslins are made in the Voigtland along the W end of the Erzgebirge Damasks and all kinds of linens are produced in the district E of the Elbe, and in the same district and about Zwickau are manufactures of woollens (broadcloth, buckskins, flannels, merinos, &c), while a considerable amount of hosiery and woollen underclothing is made at Chemnitz Leipzig is a great centre of printing and type-founding, and both it and Dresden turn out large numbers of pianos, while near the latter place are also the works at Meissen where the famous Dresden china is made Industries of less importance are the weaving of silk ribbons, trimmings, &c, the making of lace (among the peasants of the Erzgebirge, and elsewhere), violins, optical instruments, paper, straw-plait, and toys, and the manufacture of tobacco and chemicals The industries have been fostered by the abundant coal supply, true coal and lignite being raised—over 4,000,000 metric tons of the former, and over 1,200,000 of the latter—about Zwickau, Zittau, and SW of Dresden Iron, silver, arsenic, and china-clay are also of importance There are British consuls at Dresden and Leipzig, and a vice-consul at Chemnitz For other matters, see Germany

**Saxony, Prussian**, a province of Prussia, between Brandenburg and Hanover, greater part of surface in the great German plain, Hartz Mountains to the SW. reaching an extreme height of over 3700 ft; drained by the Elbe, Saale, Mulde, &c, with a large cultivation of sugar-beet, and manufacture of sugar, rearing of cattle and sheep, and growing of hops, vines, chicory, and tobacco, forests among the mountains; lignite, salt, and copper, manufactures of chemicals, woollens, fire-arms, linen, leather, machinery, and distilling of beer and brandy Area, 9750 m Pop 2,833,000.

**Scarborough**, a town of the North Riding of Yorkshire, England, 43 m by rail NE of York, small harbour, dry at low water, but vessels of 12 ft can enter at high water of spring tides, and those of 9 at high water of neap; fishing, and manufacture of jet, which is found in the neighbourhood. Pop 18,100

Schaffhausen, a canton of N Switzerland, with a chief town of the same name, surface hilly along the Jura Mountains, but with fertile valleys sloping southward to the Rhine, cattle-rearing, fishing, forests, vines for wine, and hemp, manufactures of machinery and agricultural implements, cottons and woollens, chemicals, ribbons, &c. The town, on the Rhine, 60 m by rail E by N of Basel, about 3 m. S W. of the great Falls of Schaffhausen on the Rhine, utilises the water-power there for the manufacture of iron and steel ware, agricultural machinery, woollens, silks, cottons, earthenware, flour, oil, &c. Area of canton, 114 m Pop 42,000, pop of town, 20,000

Scheldt, a river, rising in France, and flowing through France, Belgium, and Holland, to the North Sea, with a total course of some 270 m, of which about 210 are navigable, while the largest ships can go up as far as Antwerp, the chief tributaries are the Lys, Dender, and Rupel, and there is canal communication with the Somme, Seine, and Loire, and with most of the principal towns of Belgium, of the total length, about 80 m are in France, 150 in Belgium, and 40 in Holland

Schenectady, a town of New York, United States, on the Mohawk River, 17 m by rail N W of Albany, and with communication with the Lakes by the Erie Canal, manufactures of locomotives, and other machinery, Edison electric works, &c. Pop 32,000

Schiedam, a town of S Holland, on the Maas, 3 m W of Rotterdam, with distilling of the well-known gin that takes its name from the place, and manufactures of white lead, &c, herring-fishing, and export of gin, butter, and cheese. Pop 27,000

Schleswig-Holstein, a north-western province of Prussia, immediately to the S of Denmark, with the North Sea to the W, and the Little Belt and Baltic on the E. The navigable Elbe runs for some 60 m on the S W and the Kaiser Wilhelm, Eider, and Stecknitz canals cross the southern part, surface low and flat, rearing and export of cattle, fishing in Baltic, and oyster-beds in North Sea. Area, 7337 m Pop 1,388,000

Scilly Islands, a group of small islands off the coast of Cornwall, about 30 m W S W of Land's End. Of a total of some 140 islands and rocks, there are 6 with areas varying between 78 and 1628 acres, and about 30 smaller ones worthy of the name of islets. The rest are mere rocks. Fishing (especially mackerel), and the mild climate enables early flowers (narcissus, &c.), and vegetables (early potatoes and cabbage) to be reared in large quantity for the London market. St Mary, the chief island, is about 43 m from Penzance. Total area about 30 m Pop about 2200

Scotland, the northern part of Great Britain, with a mainland portion 280 m long from

Cape Wrath to the Mull of Galloway, and 25 to 150 broad, and a large number of islands off the N. and W. coasts—the Orkneys and Shetlands off the former, and the Outer and Inner Hebrides off the latter. The boundaries are given in Great Britain and England. The total area is 19,069,500 acres, or 29,796 m—of which over 600 m are lakes—and as the pop. is 4,472,103 this gives 150 persons to the m. The density is, of course, greatest in the industrial and manufacturing districts, where it is in the county of Lanark 1523, in the county of Edinburgh 1335, and in Renfrew 1123, and least in the poorer Highland districts, where in Sutherland it is 11, in Inverness 21, in Argyll 24, and in Ross and Cromarty 25. Of the total pop 155,552 are in the islands. Of the total area of the United Kingdom Scotland has about 24.5 per cent and of the pop 10.8, of the total revenue, and of the revenue applied to imperial purposes, it contributes nearly 11 per cent; of the coal raised it has 15 per cent, of the iron 6 per cent, and of the oil shale almost the entire quantity

Scotland has 32 ancient counties (besides four counties of cities), the largest being Inverness, Argyll, Ross and Cromarty, Perth, Sutherland, and Aberdeen, and the smallest Linlithgow, Kinross, and Clackmannan. There is one town, Glasgow, with over 700,000 people, one, Edinburgh, between 300,000 and 200,000, two, Dundee and Aberdeen, between 200,000 and 100,000; and five, Paisley, Leith, Govan, Greenock, and Partick, between 100,000 and 50,000.

The E coast is deeply indented by the great openings of the Moray Firth (with the Dornoch and Cromarty Firths), the Firth of Tay, and the Firth of Forth, the S W coast by the Firth of Lorne and Loch Linnhe, the Firth of Clyde (with Lochs Long and Fyne), and the Solway Firth; and all along the W coast N. of the Firth of Lorne are numerous openings, and winding sea lochs. The surface may be divided into the Southern Uplands, extending from the English border to a line drawn from Dunbar to Ayr, and throwing out shoulders to the N W of this along both sides of the Clyde valley, the Central Lowlands between the line mentioned and another drawn from Stonehaven to the north of Loch Fyne; and the Highlands to the N and N W of the last line. The division is, of course, a rough one, for the first section contains considerable stretches of flat country along the Solway Firth, along the lower Tweed, and on both coasts, but the rest of it is a mass of swelling green hills reaching elevations of from 2000 to 2700 ft., the Central Lowlands are intersected by the Sidlaw (1235), and Ochil (2363), Hills, N E and S W of the Tay at Perth, by the Fintry Hills (1676), Campsie Fells (1894), and Kilmpatrick Hills (1313) between Stirling and Dumbarton, and

by other ridges of lower elevation; and the Highlands have a considerable extent of flat ground in the N E of Aberdeenshire, round the margin of the Moray Firth, across Caithness, and all along the N and W coasts, though by far the greater part of the surface is covered with great mountain masses, nearly 200 hill tops rising to a height of over 3000 ft, and seven to over 4000. This region is divided by the Great Glen of Scotland, a narrow trough-like hollow running across Scotland from Loch Linnhe to Inverness, and partly occupied by a chain of lochs—Loch Ness, Loch Oich, and Loch Lochy—the highest of which, Loch Oich, has its surface only 105 ft above sea-level. In many parts of the Highlands, especially in the S W, there are other fresh-water lakes, many of them of considerable size, the largest being Loch Lomond, with an area of 17,420 acres and a height above sea-level of 23 ft. The drainage of the N E is carried off by the large rivers flowing to the Moray Firth, of the rest of the E by the Don and Dee, the North and South Esks, the Tay, the Forth, the Tweed, and their tributaries, as well as many smaller streams, of the S by the Annan, Nith, Dee, &c., of the S W by the Clyde, Ayr, Doon, &c.; and along the rest of the W and N coasts by streams which are, with the exception of the Lochy and the Awe, mostly short and small, though swift, the watershed lying at no great distance from the sea. Many of the rapid Highland streams will probably, however, prove of industrial value for the development of electrical energy, and some are already so employed. The climate is warmer than might be expected, owing to the wash of the Gulf Stream along the W and N coasts, the nearness of all places to the sea (none over 40 m distant), and the most prevalent winds bringing from the warmer seas of the W and S W heat and abundance of moisture. The summer and winter isotherms present the same contrast as in England. In summer the heat increases from N to S,—from the mean of 54° Fahr to the N. of the Orkney Islands, to 59° along the border. In the winter the lines range from N to S, the mean of 39° sweeping through the Orkneys, and along the N and W coasts at no great distance from the sea, while the line of 37° passes down the E coast in a similar way, and from both the temperature falls as one goes farther inland. On the mean of the whole year there is a finger-like warmer area projected inland from the Firth of Clyde eastward along the great central valley: the low ground permits the warmer air from the W to be carried inland. Along the E coast from Berwick on Tweed to Montrose, along the Moray Firth coast from Banff to the entrance of the Dornoch Firth; and across the N E of Caithness, there are strips where the average rainfall is under 25 in., and from this there is

a gradual increase westward, till along the watershed and in Skye the amount is 50 to 80 or more in.—the wettest parts being in Skye, from Loch Torridon to the W side of Loch Linnhe, and between the E side of Loch Linnhe and the N end of Loch Lomond.

*Productions and Resources*.—Of the total area 22 per cent are uncultivated, 4.5 under wood; 48 heath, &c, fit for grazing; and only 25 under crops and grass. The Highland districts are mainly given up to the grazing of sheep and cattle, deer forests, and grouse moors. The chief crops are oats and barley, the former occupying some 75 per cent of a total of about 1,250,000 acres under corn-crops, and the latter about 19 per cent. Wheat has about 4 per cent, and beans a very small proportion. Of more than 600,000 acres under green crops, two-thirds are occupied by turnips, and over one-fifth by potatoes. Of the whole crop and grass area 32 per cent are under clover and rotation grasses, and 28 under permanent pasture. Over 6 per cent of the people are dependent on agriculture. The live stock comprise more than 194,000 horses, 1,200,000 cattle, and 7,400,000 sheep (nearly a fourth of the whole for the United Kingdom). More than half of the total holdings are under 20 acres, and less than 1 per cent over 500, but nearly half the entire cultivated area is in holdings of between 100 and 300 acres. The fisheries are exceedingly valuable—considerably more than a third in quantity, and nearly a fourth in value, of the whole product of the United Kingdom. Cod, ling, herring, &c, are caught off the E, N, and W coasts; as well as large quantities of haddock, whiting, halibut, turbot, sole, &c. Probably 85,000, or more of the adult population, are dependent on this industry. There are also valuable coast and river salmon fishings. Of the total value of minerals produced in the United Kingdom over one-eighth comes from Scotland, the chief kinds being coal (£12,000,000), oil shale, igneous rocks, sandstone, iron ore, and clay (£600,000 to £100,000)—total value about £15,000,000. The coal comes mainly from Lanark (one-half), Fife (one-sixth), Ayr (one-seventh), Stirling, Edinburgh, and Linnithgow, smaller quantities from Dumbarton, Haddington, and Clackmannan. All the deposits are practically in the lowlands except that a little lignite is extracted in Sutherland. The fireclay comes mostly from Lanark, and Ayr; the ironstone from Ayr, Lanark, and Renfrew; the oil-shale from Linnithgow, and Edinburgh; clay from Lanark; igneous rock from Aberdeen, Lanark, Edinburgh, and Fife, sandstone from Lanark, Dumfries, Edinburgh, and Ayr; and limestone from Edinburgh, Fife, and Lanark. Lead with silver is found in small quantity in S Lanark, and Dumfries. The oil-shale and paraffin industry

has lost ground in recent years, owing to the competition of American and other foreign oils which can be obtained at a much smaller cost. Pig-iron is made in Lanarkshire, Stirlingshire, and Ayrshire, and iron and steel goods, and machinery in Glasgow, Falkirk, and the surrounding districts. Iron and steel ship-building, which is very important, is carried on mainly on the Clyde (Glasgow, Renfrew, Clydebank, Dumbarton, &c.), though there are also yards at Aberdeen, Dundee, and Leith, and there are paraffin works all round Bathgate, aluminium works at Foyers, Inverness-shire (the bauxite being brought from Ireland, and the electricity for working developed by water-power), manufactures of cottons (both spinning and weaving) in Glasgow and many of the towns near it, of carpets and heavy woollens, Glasgow, Ayr, Paisley, Kilmarnock, &c., of tweeds in the southern counties, of blankets, &c. in Stirlingshire, Clackmannan, &c., of plaids and winceys in Elgin, Inverness, and Aberdeen, worsted at Alloa, Kinross, &c., linen in Forfar, Fife, Perth, Kinross, and Clackmannan (Dundee, Dunfermline, Arbroath, Montrose, &c.), jute and hemp (Dundee), silk (Glasgow, Paisley, &c.), linoleum and other floor-cloths (Kirkcaldy), chemicals, paper (Midlothian, Aberdeenshire, &c.), glass, pottery, &c. Some 108,000 persons are employed in connection with coal, iron, and shale mining, over 1300 in connection with the working of other metals, and over 13,000 in quarrying operations, while some 25 per cent. of the whole population are engaged in all the industries together. Distilling and brewing do not give employment to any large proportion of the population, but the products are of considerable value. Efforts are being made to extend or revive the home industries and the spinning, weaving, and knitting, of woollens, &c. in various parts of the Highlands and Islands, and to extend the keeping of poultry for the sale of birds and eggs. The shipping and commerce are dealt with under Great Britain.

**Communications**—There are everywhere good and well-kept roads, and the Forth and Clyde, Crinan, and Caledonian Canals are separately noticed. The Tay is navigable to Perth, the Forth to Stirling, and the Clyde to Glasgow. The south of Scotland is served by the Caledonian, Glasgow and South Western, and North British Railways, and their branches, and the first and last also serve the centre, the N.W. and the E. as far as Aberdeen. From Aberdeen northward to Elgin and Inverness is the Great North of Scotland Railway, and from Perth and Keith, by Inverness, the Highland Railway passes northward all round the N. side of the Moray Firth to Caithness. Glasgow and Oban are the centre of steam coasting navigation on the W., and Aberdeen and Leith on the E., there being communi-

cation from the first to Ireland and all round Great Britain, as well as to most foreign countries, from the second to Glasgow, and to the W. and N.W. Highlands; and from the last two all up and down the E. coast from Shetland to the Thames, as well as to the various countries of Europe to the E. of the North Sea.

**Scranton**, a town of Pennsylvania, United States, 144 m. by rail N.W. of New York, very large anthracite coalfield all round; important railway centre, manufactures of iron and steel (locomotives, boilers, mining and other machinery, tools, rails), carriages and waggons and coal-mining appliances, spinning and weaving of woollens and silk. Pop 102,000.

**Seattle**, a town of Washington, United States, on Elliott Bay, opening off Puget Sound, 20 m. by rail N. by E. of Tacoma, excellent communication by the Northern Pacific and other railways; shipbuilding, fish-canning, glass-making, lumber mills, coal in neighbourhood, fishing; imports salt, soda, cement, glass, bleaching powder, rice, tea, coffee, sugar, and manufactured goods; exports coal, lumber, hides, and canned fish. Of 600,000 tons entered and cleared 30 per cent. are British. Regular communication from London, Liverpool, and Glasgow. British vice-consul. Pop 81,000.

**Sedan**, a town of the department of Ardennes, France, on the Meuse, 64 m. by rail N.E. of Rheims, with manufactures of woollens, woollen yarn, machinery, metal ware, &c. Pop 19,500.

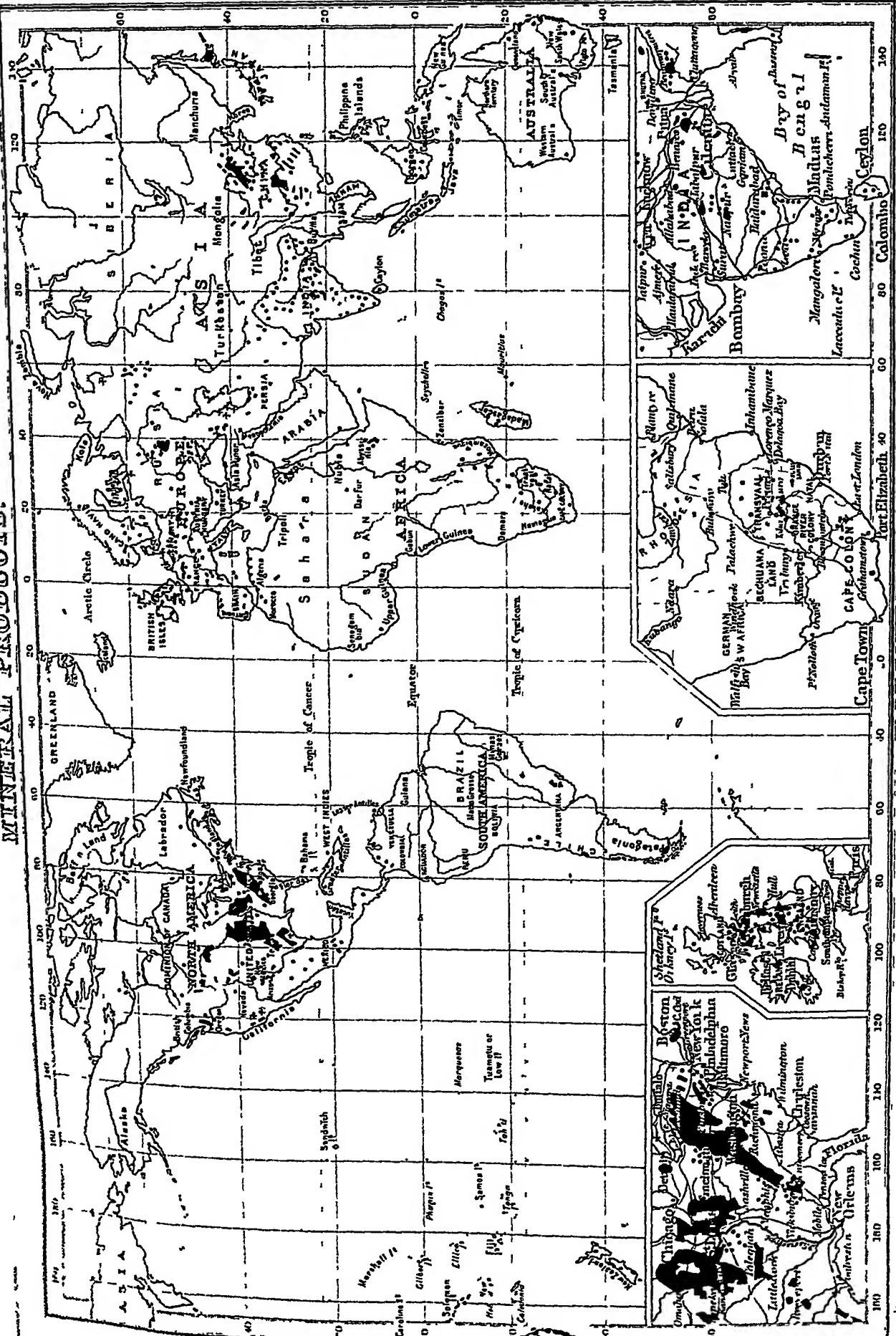
**Seine**, a department of France, containing Paris and the district about, growing of fruit and vegetables, gypsum, dye-works, and manufactures of metals, chemicals, leather, glass, india-rubber goods, and china. Area, 184 m. Pop 3,670,000.

**Seine**, an important river of France, flowing northward to the English Channel, which it enters by an estuary 7 m. wide at the mouth, of its course of 480 m. 350 are navigable, and from Paris to Rouen the river has been practically canalised, to take vessels of 10 ft. trade being carried on by specially designed and constructed barges of 1000 tons burden, which are mostly taken up and down by means of tugs and tow-boats. The cost of carriage up stream from Rouen to Paris is a little over 3s. a ton, and down stream about 2s. 4d. The principal tributaries from the N. are the Aube, Marne, and Oise, and from the S. the Yonne, Loire, and Eure, and there is canal communication with the Saône, Loire, Rhine, Meuse, Scheldt, and Somme. There is depth of water, as far up as Rouen, for vessels up to 22 ft. Area of basin, 30,000 m.

**Seine-et-Marne**, a department of N. France; surface flat or undulating, forests, cheese-making (Brie), sandstone and gypsum; manufactures of flour and beet-sugar, paper, and glass. Area, 2215 m. Pop 358,500.

**Seine-et-Oise**, a department of N. France;

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undulating, drained by Seine, Oise, Marne, and their tributaries, sugar-beet; manufactures of porcelain (Sèvres), silks, cottons, and woollens, iron, copper, laces, chemicals, flour, sugar, pepper, &c. Area, 2164 m Pop 707,500

Seine-Inférieure, a department of N France, with a coast-line extending along the English Channel for about 75 m, surface undulating, drained by Seine and smaller streams, colza, flax, apples for cider, cheese, great manufactures of cotton and wool, linen yarn, ship-building, manufactures of locomotives and other machinery, dye-works, foundries, sugar-refining, chemical works, copper works, fisheries along the coast. Area, 2330 m. Pop 854,000

Selkirk, an inland county of S E Scotland, extensive sheep-farming, and manufactures of woollen cloth. The county town of the same name, 6 m N of Galashiels, has manufactures of woollen cloth. Area of county, 170,762 acres. Pop 23,356, pop of town, 6292

Serang. See Liège

Sergipe, a state of Brazil, on the E coast, S of the San Francisco River, with a coast-line of about 150 m, the coast is flat and sandy, but the surface of two-thirds of the state is mountainous, with fertile valleys and rich tropical vegetation. Sugar-cane, cotton, manioc, and tobacco are all cultivated. India-rubber trees grow wild, but the quality of the product is poor, and attempts are being made to introduce a better variety of tree from Ceará, the forests also contain medicinal plants, the imports and exports amount to about £400,000 a year, the former consist of general goods, the latter of sugar, cotton, rum, salt, dried and salted hides and skins, maize, cotton-seed oil and meal, boot-soles, rubber, ticum fibre, castor-oil, cocoa nuts, manioc, rice. The United Kingdom supplies coal, steel tools, screws, barbed wire, cutlery, iron roofing, hoes, kettles, blacking, ink, ready-made paint, and cotton goods, German, zinc-sheets, pots and pans, door locks, cheap cutlery, and shawls, the United States sends petroleum, galvanised barbed wire, axes, hatchets, and cheap tools (see Aracaju). Area of state, 15,090 m Pop 360,000

Servia, a kingdom in the northern part of the Balkan Peninsula, with its centre about

streams flowing to the Save, and by the Timok and other streams flowing to the Danube. The temperature varies with height but has a great range, often in winter falling below zero, and often in summer rising above 100° Fahr. The average rainfall is about 25 in. The government is a hereditary monarchy with a Senate and a National Assembly. The pop is 2,494,000, of whom over 77 per cent. are dependent on agriculture. The Danube and Save are navigable, and the Drina is navigable for over 100 m along the W border, and there are over 3000 m of roads, but a large part of them are in a very bad state. There are only about 360 m of railway. Although Servia has minerals in considerable quantity, it meanwhile depends, as we have seen, on agriculture. Gold, copper, antimony, and silver-lead are worked, but the full development of these and of the iron, zinc, quicksilver, asbestos, and oil-shale, must await the extension throughout the country of proper communications by rail and road. The only industry of more than local value is flour-milling. The leading grains are wheat and maize, but there is also production of considerable quantities of barley, rye, oats, fruit, and vegetables. The imports are valued at about £2,000,000 (of which Austria-Hungary sends over half, Germany over one-quarter, and the United Kingdom only about one-twelfth), the exports at over £2,500,000 (of which Austria-Hungary takes nearly 85 per cent, Germany about one-eighteenth and the United Kingdom none), and there is a transit trade of over £700,000. The chief imports are machinery and implements and tools of all kinds, metals and metal work, chemicals (drugs and colours), cottons and cotton yarn, hides and leather, food-stuffs (colonial produce, &c.), woollens, apparel, pottery and glass, wood and wood work, paper, oils and grease, hardware, salt, and coal and lignite. More than half of the textiles come from Austria-Hungary. Of the exports, agricultural and garden produce amount to nearly one half—wheat (one-sixth), maize, barley, rye, and oats, dried plums, fresh fruit and vegetables (French beans, peas, onions, potatoes, &c.). Animals and animal

from and to London twice a day, letters, 2½d. per half-oz., postcards, 1d., parcels, *via* Hamburg, under 3 lbs., 1s 9d., between 3 and 7, 2s 3d., between 7 and 11, 2s 9d.; *via* Cologne, 3d. more in each case, money orders to and from, telegrams, 3½d. a word. The metric system is used, the coin of account being the dinar=100 paras=one franc. The Servian flag has a border of white with alternate red and blue triangles upon it, and in the middle three horizontal bars of red, blue, and white (red above). In the centre, on an ermine curtain crowned, is a crowned shield bearing a two-headed eagle on the breast of which is still another shield with a St George's cross.

**Setubal (St Ubes)**, a port of Estremadura, Portugal, on the N. side of the bay of the same name, 18 m. by rail S E of Lisbon, depth on bar 23 ft. at high water of spring tides, and 20 ft. at high water of neap tides, imports coal, oil, tin-plate, and general goods except textiles, which are forbidden, exports large quantities of salt to all the principal fishing countries of Europe, sardine fishery, oranges, lemons, grapes, wine, cut corks, manufactures of cork, and hand-made lace. British vice-consul. Pop 22,000.

**Severn**, a large river of Wales, and W. England, with a course of over 200 m. from North Wales to the Bristol Channel, principal tributaries, from the E. Stour and Avon, and from the W. Wye, Usk, and Taff. It is navigable by barges for 180 m., and has been deepened so as to allow vessels of 9 ft. to get as far as Worcester, while to Gloucester (*see* Gloucester) there is canal communication. Great stretches of mud-bank are left bare in the estuary at low water, and there is a dangerous bore, which occasionally rushes up with a height of from 5 to 9 ft., and at times does a considerable amount of damage. At New Passage a tunnel from 45 to 100 ft. below the bed of the river and 4½ m. long provides a crossing for the Great Western Railway. Area of basin about 6000 m., or, exclusive of the Wye, about 4400.

**Seville**, a river port of S. Spain, on the Guadalquivir River, 95 m. by rail N N E of Cadiz, depth on bar at high water of spring tides 20 ft., and in the river itself 18½ ft. at spring tides, and 17 at neaps, imports timber, chemicals, coal, machinery, petroleum, iron and steel, coffee, textiles (linens, cottons, woollens), yarn and jute, and general goods, exports lead, quicksilver, iron-ore, olives, olive-oil, oranges, corks, corkwood, oats, lead ore, copper pyrites, wine, &c., manufactures of iron, machinery (olive presses, &c.), pottery, silk, cottons, cigars. Of over 1,600,000 tons entered and cleared over one-fourth is British. Of a total import of more than £800,000, Britain sends one-third, and of exports of £1,300,000 it takes three-fifths. Regular communication from London and Glasgow. Letters, 5 days. British vice-consul. Pop 146,500.

**Sèvres**, a town of the department of Seine-et-Oise, France, 10 m. by rail, but only some 2 m. in a direct line, S W. of Paris, on the Seine, with manufactures of porcelain, stained glass, and mosaics. Pop 8500.

**Seychelles**, a small group of islands belonging to Britain, in the Indian Ocean, 1770 m. S E of Bombay, about 1000 m. E by N. of Zanzibar, and 935 N. of Mauritius. The largest island is Mahé, 17 m. long and 4 to 7 broad, with an area of about 55½ m., and there are other three islands of from 4 to 16 m. in area, and about 70 smaller ones, mountainous, reaching in Mahé an extreme height of some 3000 ft., cocoa-nut palms, maize, manioc, vanilla, and cloves, imports (total value about £65,000) are provisions and general goods of all kinds, exports (total value nearly £70,000), cocoa-nut oil, vanilla, tortoise-shell, cocoa-nuts, soap, guano, and salt fish. From the leaves of the famous *cocos-de-mer* beautiful hats and basket work are produced by the natives of Praslin, the second largest of the islands. Imports mostly from and exports mostly to the United Kingdom, France, India, and Mauritius. Cloves are grown, and all kinds of fruit, and the manufacture of lime juice might easily become valuable, and tobacco be cultivated on a large scale. In dealing with these, preparing vanilla, coffee, and cacao, extracting cocoa-nut oil, and in the manufacture of aloe-fibre, the making of preserves and pickles, the extension of fruit-growing, and the development of the calipee, *bêche-de-mer*, tortoise-shell, and pearl-shell, fisheries, there is full scope for the development of the island. Rubber is being tried. Of a total trade of over 300,000 tons 90 per cent. are British. Victoria, on Mahé, is an imperial and mercantile coaling station. Mails from and to London every month, letters, 1d. per half-oz. postcards, 1d., parcels, not over 3 lbs., 2s., between 3 and 7, 3s., between 7 and 11, 4s., money orders to and from; telegrams, 3s. a word, letters, 19 days, regular communication from Marseilles. Area of group, 148 m. Pop 20,500.

**Sfax**, a port on the E. coast of Tunis, on the Gulf of Gabès, 75 m. S of Susa, with a depth, alongside quays, of 30 ft. at high water, 24 at low, imports cotton goods, hardware, wines, drugs, provisions, and general goods, exports esparto, olive-oil, dates, wool, almonds, sponges, &c., fruit-growing, and manufactures of cottons, woollens, silk, salt, esparto, cord, and leather. Distance from London, 2900 m.; Liverpool, 2825, Glasgow, 2930. British vice-consul. Pop 42,000.

**Shanghai**, a port in the extreme S E corner of Kiangsu, China, at the point where the Hwang-po and Woosung Rivers join the Yang-tse-kiang, 12 m. up from the sea, and 160 m. S E of Nanking. It is situated in the midst of a great plain, with rice-growing to the W. and N., and cotton to the W. and S., and, mean-

and 1 1/2 m. opium, paper, 1 lb. 1, vegetable oil, nut-oil, tobacco, medicines, hemp, sugar, vermicelli and macaroni, 1 lb. 1/2, opium (fresh and pressed), tallow, wax, feathers, ground-nuts, mustard, dried lily flowers, rice-cloth, fungus, varnish, &c. Of the whole about one-twentieth part goes to Asiatic Russia; over 13 per cent. to Hong-Kong, about one-ninth to Great Britain, India, the Straits Settlements, and Australia; about one-ninth to Japan and Formosa, about one-eighth to the United States and Sandwich Islands; over two-ninths to the various countries of continental Europe, and about five-eighths to other parts of China. Of the imports nearly one-sixth comes from Great Britain, nearly one-twelfth from Hong-Kong, about one-fifteenth from India, Japan and Formosa, and the United States; about one-seventeenth from the different countries of continental Europe, about one-sixty-fifth from Asiatic Russia, and about one-120th from the Straits Settlements and Australia. Of a total tonnage entered and cleared of over 9,000,000, more than half are British. There are manufactures of cotton, silk, paper, matches, flour, kerosene tank oil and tinning establishments, and hydraulic packing factories. As regards the production of cotton, the place promises to be one of the largest manufacturing centres in Asia, and the development of the

inland from the Gulf of Pechili and the Yellow Sea, irrigated soil has rich crops of rice, silk produced in large quantities, as well as grain, and cotton and earth-nuts are grown, coal and lead are found in the N.W., and gold in the E., trade carried on at the port of Chefoo on the N. coast; drained by the lower waters of the Hoang Ho and its tributaries, and by smaller streams flowing to the Gulf of Pechili and the Yellow Sea; traversed by the great Imperial Canal. Area, 55,500 m. Pop 36,248,000

Sheerness, an estuary and royal dockyard and arsenal on the Thames at the mouth of the Medway, on the Isle of Sheppey, Kent, 12 m by rail E.N.E. of Chatham, and 43 below London. Apart from the great government dockyard, which has an area of 60 acres, there is a small town harbour, with a depth of 12 ft at high water of spring tides, and there is some export of oysters from the neighbouring oyster-beds. Pop 18,273

Sheffield, a town of the West Riding of Yorkshire, England, at the junction of the Sheaf and Don, 46 m by rail S.S.W. of York, and 163 m N.N.W. of London, with coal and iron-stone in neighbourhood, and grindstone quarries, which have helped to make it one of the foremost places in the world in the manufacture of steel and cutlery, the latter includes tools and implements of every kind,

and among the steel goods may be mentioned armour-plate of any size, steel cases for shells, steel rails, wheels and all kinds of shafting, engine castings, coach and railway springs, boilers, &c., there is also a large amount of silver plate turned out, as well as Britannia metal goods, iron and brass ware, bicycles, optical instruments, combs, brushes, and leather. Canal communication with Goole. Pop 380,717

**Shensi**, a province of north-central China, W of Shansi, mountainous, with fertile valleys producing heavy crops of wheat; mining, deposits of coal, which are worked locally. Area, 74,000. Pop 8,432,500

**Shetland Islands**, a group of some 27 inhabited, and over 70 smaller, islands, forming a county in the extreme N of Scotland. The chief town, Lerwick, is 116 m NE of Kirkwall in Orkney, and about 220 in a direct line W of Bergen in Norway. Sheep, cattle, and ponies, off the coast important fisheries of herring, cod, ling, and tusk, household industries in knitted shawls, stockings, gloves, &c. Lerwick is a fishing centre. Area, 352,889 acres, of which the Mainland has about 242,000. Pop 28,166, of whom the Mainland has 19,676, pop of Lerwick, 4541

**Shields, North, and Shields, South**, ports of Northumberland, England, 7 m ENE of Newcastle, at the mouth of the Tyne, depth on bar 25 ft at low water of spring tides, for docks and trade see Newcastle-on-Tyne. Distance from London, 315 m. Pop of North Shields included in that of Tyne-mouth, pop of South Shields, 97,267

**Shrewsbury**, a town of Shropshire, England, on the Severn, 36 m by rail SS W of Crewe, and 42 W by N of Birmingham, stained glass, iron-founding, and making of agricultural implements. Pop 28,396

**Shropshire**, a county of western England, near the centre of the border with Wales, small detached coalfields, with iron, lead, limestone, and small quantities of barytes and zinc, blast-furnaces and iron manufactures. Area, 859,516 acres. Pop 239,321

**Siam**, a kingdom lying mainly in the centre of the Indo China peninsula with British Burma on the N and W, and French Indo-China on the NE, E, and SE, with a long strip running down the northern half of the Malay Peninsula between the Strait of Malacca and the Gulf of Siam, and with the British possessions and protectorates of the Malay Peninsula to the S. The western half of the main portion consists of the valley of the Menam (500 m long and 160 wide), and the eastern half of the Korat plateau, with an elevation of 700 to 1000 ft, which stretches to the Mekong basin. The total area is probably about 244,000 m, and the pop 6,000,000. The N, round the head water of the Menam, is mountainous, rising to heights of 6000 to 8000

ft. The S is a great alluvial plain, drained by the rivers mentioned and their tributaries, of which the chief is the Meping joining the Menam. The mean temperature in the lower ground is about 80° Fahr, and the average rainfall 54 in., of which a very large proportion comes during the wet season, from the beginning of May to the end of October. There are little over 200 m of railway, and the most important communication is by river and canal, the roads being mere horse and foot tracks. Canals are being extended all over southern Siam, both for trade and irrigation. The mineral resources are hardly known, but gold is worked in a number of places (Kabin, Wattana, &c., E of Bangkok, and in the Malay Peninsula), coal is found in the Malay Peninsula, petroleum on the upper part of the Meping, tin in the Malay Peninsula and along the Mekong, iron occurs on the plateau, and rubies and sapphires are found. For trading purposes the wealth of the country lies in the rice of the S, and the teak and other timber trees of the N, Siam coming second to Burma (but very considerably behind) in the world's supply of teak. The imports are valued at £2,500,000, and the exports at over £3,000,000, of which more than £2,200,000 are for rice, and over £300,000 for teak. The chief imports are cottons, machinery and iron and steel goods, opium, silks, sugar, kerosene, and gunny bags. The share of Great Britain in the commerce cannot be exactly estimated, as a large portion of the trade passes through Singapore and Hong-Kong, but the direct imports from the United Kingdom to Siam are valued at about £200,000—mainly cottons, machinery, and iron (wrought and unwrought)—and the direct exports from Siam, mostly teak, vary from £20,000 to £60,000. For trade, see Bangkok, Chiangmai, and Moulmein. There are British consuls at Bangkok, Chiangmai, and Kedah. Mails from and to London every week, letters, 2½d per half-oz, postcards, 1d; parcels, *via* Singapore, under 3 lbs, 2s, between 3 and 7, 3s, between 7 and 11, 4s, *via* France or Italy, 1s more in each case, money orders to and from, telegrams, 3s 9d to 5s a word, according to route. The coin of account is the tical = nominally 2s, a catty = 80 ticals, a tamlung = 4 ticals, a tical = 64 atts, chang = 2½ lbs avoirdupois, a wah = 2 sok = 4 keup = 48 mu = 80 in. Rupees and Mexican dollars are current. The Siamese flag is red with in the centre a white elephant, and a white, rayed sun in the upper corner next the staff.

**Siberia**, the name given to all the territories of Russia in Asia, except the Trans-Caucasus, Caspian, and Turkestan regions, or the whole of the expanse between the Urals and the Pacific, and between the Arctic Ocean and the Chinese Empire. The total area is about 5,350,000 m, or some one and a half times the size of Europe, and the pop about 8,000,000

mountainous and is still growing. It affects a district of 10,000 m. and the quantity produced at present is over 2,000,000 lbs. About one-ninth of the total production of grain (3,000,000 tons) is exported, in different ways out by Archangel, Rostov, Lwow, St. Petersburg, and Riga, and even by Rostov and Novorossiysk. From eastern countries Siberia imports cotton, silk, and sugar, and from the W iron and iron goods, machinery, manufactured goods, petroleum, food-stuffs, agricultural implements, &c., Germany (with 30 per cent of the trade, thanks to the activity of the firms concerned) sends all sorts of goods of every kind in demand, and the United Kingdom cottons, woollens, iron, tin, and machinery. Every step of the coming development of the country will demand foreign-made articles—machinery, implements, and the necessary appliances of all kinds—mining, shipping, saw mill, electrical, &c.—so that there is a wide field for British enterprise by advertisement (in the language, weights, measures, and money understood of the people), and by commercial travellers who will canvass and influence customers by personal suasion.

Siberian Railway, a great line passing from W to E through the southern portion of the territory just described, and providing means for opening up and developing the resources of

Kandalovo, 505, Kandalovo to Stritensk, 168, Kandalovo to Nagaiwan (Chinese frontier), 216, Nagaiwan to Harbin, 636, Harbin to Vladivostok, 451 m., Harbin to Port Arthur, 653, Vladivostok to Habarovsk, 151; Harbin to Habarovsk, 601. Total distances: Moscow to Vladivostok, 5119 m.; Port Arthur, 5652, Habarovsk, 5800. The total cost has probably been over £100,000,000. The whole distance from Moscow to Port Arthur can, it is said, be covered in 18 days, the fare is to be about £35. The line has already created a rapidly growing butter production in western Siberia, and will also benefit the important grain trade.

Sicily, a large island in the Mediterranean, at the S end of the peninsula of Italy, to which country it belongs. Triangular in shape it has a length from E to W of 180 m, a width of 120, and an area of 9828, and is separated from the mainland by the Strait of Messina, 2 m across at the narrowest part, and 150 fathoms deep. The surface is, except for narrow coastal strips, a plateau of 500 to 1900 ft above sea-level, with mountains rising above it, and reaching in the N heights of over 6000 ft, and in Mount Etna in the N E of over 10,800 ft. The rivers are small and unimportant, and many of them dry up in summer. Climate delightful (though malaria is prevalent in some

districts) with a temperature ranging from 45° to 79° Fahr and reaching an extreme of 118°, abundant rainfall in winter. Large tracts of woodland with oaks, chestnuts, beech, hollies, &c. The soil is rich and produces large crops of wheat and barley (of the first one-seventh of the total production of Italy, and of the second one-half), grapes, oranges, lemons, sumach, olives, dates, figs, almonds, locust beans, tobacco, mulberries, &c. Of the Italian crop of fresh fruit it yields nearly 90 per cent, large quantities being exported, and there is also a great manufacture of wine (over 60 per cent. of Italy). In the N E silkworms are reared, and silk is woven at Catania. A great many pigs are reared, especially in the hill districts. The agriculture is of the rudest, and, with proper appliances and methods, crops of every kind might be largely increased. Communication, far from good, there being little over 3600 m of roads, and only about 650 m of railway. Sulphur is extensively worked in the centre and S, the annual production being over 500,000 tons, and there are rich deposits of rock salt hardly at all developed, while bay salt is made on the E and S W. coasts, asphalt is worked at Syracuse, and copper, silver-lead, and antimony at Messina. There is some little manufacture of silk, cement, macaroni, gloves, and soap, coral polishing at Trapani (fishing on African coast), tunny, sardine, sword-fish, and anchovy fisheries, amber worked in Catania. Pop 3,529,500.

Sierra Leone, a British colony in W Africa, with a large protectorate inland, between 6° 55' and 10° N, with a coast-line of 210 m, with an extreme length from N to S of 210, and a breadth from E to W of about 180, surface very variable, some parts being low and swampy and others mountainous, rising to a height of over 3000 ft. The wet season extends from May to October, and during that period violent thunderstorms and tornados occur. The temperature varies from 62° to 89° Fahr, and the rainfall is about 170 in. Cotton is being tried and will probably become an important crop. Imports (total value about £600,000, of which about four-fifths come from the United Kingdom), cotton goods, hardware, and provisions and general goods, exports (total value about £350,000), palm oil and kernels, benni seed, ground nuts, kola nuts, india-rubber, copal, hides, and ginger, of which about one-third goes to the United Kingdom. Of a total of 1,291,000 tons entered and cleared three-fourths are British. There is a short railway from Freetown, westward for 135 m. The chief town, Freetown, 44 m up the Sierra Leone River, has an excellent harbour, with a depth at entrance of 60 ft., and where ships can lie in from 6 to 14 fathoms, imports and exports those of the colony, important coal-ing station. There is regular communication

from Liverpool—length of passage, 14 days, mails from and to London every week or oftener, letters, 1d per half-oz; postcards, 1d; parcels, under 3 lbs, 1s, between 3 and 7, 2s, between 7 and 11, 3s, money orders to and from, telegrams, 4s 6d a word, letters, 14 days, parcels, 17. Distance from London, 3000 m; Liverpool, 2925, Glasgow, 3030. Area of the colony proper about 4000 m. Pop estimated at 127,000. Area of protectorate about 30,000 m. Pop estimated at 1,000,000, pop of Freetown, 29,000.

Silesia, a small duchy of N. Austria, lying along the border, between Moravia and Silesia in Prussia, Sudetic Mountains in the N, and spurs of the Carpathians in the E, reaching an extreme height in the former of over 4880 ft, drained by upper waters of Oder and Vistula, important coalfield, and deposits of lignite, iron, and sulphur, blast-furnaces; and the making of machinery, cottons, woollens and worsteds, linen and linen thread, ribbons, hosiery, chemicals, sugar, glass, paper, &c. Area, 1987 m. Pop 680,500.

Silesia, a province in the extreme S E of Prussia, with Austrian Silesia, Bohemia, and Saxony, along the S, hilly to the S, where the Sudetic Mountains reach an extreme height of 5260 ft, elsewhere the surface is flat, intersected from S E to N W by the Valley of the Oder. To the N and E of the Oder a good deal of the soil is light or marshy, with timber, the woodland covering nearly one-third of the total area, between the Oder and the hills the ground is fertile and there are good crops, including sugar-beet, fruit, and oil-plants, sheep, horses, and cattle, large and important coalfield in the S E, and mining of zinc, iron, and silver-lead, manufactures of linen, cotton, zinc, iron, lead and silver, carpets and other woollens, beet-sugar, starch, paper, glass, &c., bleaching and dyeing, leather, brewing and distilling. Area, 15,566 m. Pop 4,669,000.

Silverton, a town of New South Wales, about 18 m from the border of South Australia, and about 820 m by rail W of Sydney, large deposits of silver and tin, Broken Hill is 17 m to the S E. Pop 300.

Simbirsk, a government of S E Russia, with a chief town of the same name, surface a deeply cut plateau with hills, drained by Volga and its tributaries, exports grain, linseed, and hemp-seed, and has a large trade in timber and wooden goods. The chief town, on the Volga, 350 m by river S E of Nijn-Novgorod, and 450 in a direct line E S E of Moscow, has a well-known fair, and a large trade in wheat, wool, fruits, and potash. Area, 19,110 m. Pop 1,549,461, pop of town, 43,500.

Simon's Town, a harbour on False Bay, 22 m by rail N of Cape Town; excellent anchorage, headquarters of Cape and West African squadron, fortified, and gradually being con-



pets, rugs, and other woollens, cotton, earthenware, &c., depth of harbour at entrance to inner port 39 ft., and vessels can lie alongside quays in 20 to 30 ft. The trade is very important, imports (total value some £2,500,000, of which Great Britain sends about one-third), textiles and yarns, timber, iron and steel and hardware, leather, glass, petroleum, coal, paper, jute and hemp fabrics, chemicals, china, provisions, &c., exports (total value some £4,000,000, of which Great Britain takes over the half), raisins (nearly one-fourth of the whole), barley, figs, valonea, opium, carpets, cotton, tobacco, sponges (transit), olive-oil, beans, liquorice, emery, sesame, hides and skins, wool, antimony, cotton-seed, zinc ore, gum arabic, gum mastic, gall-nuts, manganese, madder, scammony, wax, wine, silk, &c. Of some 3,800,000 tons entered and cleared over one-sixth is British. Mails from London twice daily, return mails thrice a week, parcels, under 3 lbs, 1s, between 3 and 7, 1s 6d, between 7 and 11, 2s, *via* France and Italy, in each case 1s more, money orders to and from, letters, 6 days; parcels *via* Brindisi, 9 days; *via* Gibraltar, 15½ days. Regular communication from London and Liverpool. Distance from London, 2950 m, Liverpool, 2870, Glasgow, 2980. British consul-general. Pop 201,000.

Socotra, an island in the Indian Ocean, 72 m long by 22 wide, lying in the direct route to India, about 150 m E N E of Cape Guardafui, at the eastern extremity of N Africa, surface rises to a height of 4500 ft., famous for its aloes, and produces also dragon's blood. Area, 1382 m. Pop estimated at 12,000.

Soderhamn, a port on the E. coast of Sweden, on the Gulf of Bothnia, 43 m N of Gefle, depth at entrance, 19 ft., imports coal, salt, manures, and general goods, exports iron, timber, and wood-pulp. Of 300,000 tons entered and cleared one-fifth is British. British vice-consul. Pop 11,500.

Sofia, the chief town of Bulgaria, with some little trade in hides and wheat. British consul-general. Pop 68,000.

Solenhofen, a village of Middle Franconia, Bavaria, with famous quarries of lithographic stone. Pop 1900.

Solent, the strait between the N W side of the Isle of Wight, on the S coast of England, and the mainland, 17 m long, and with an average width of about 3 m except at Hurst Castle, where the distance across is only three-quarters of a mile.

Solingen, a town of the Rhine Province of Prussia, 6 m. S S W of Elberfeld, famous for its steel and iron wares, sword-blades, knives, scissors, surgical instruments. Pop 45,500.

Solomon Islands, a group belonging partly to Germany and partly to Great Britain, in the western Pacific, some 500 m E of New Guinea,

with the centre in about 8° S and 160° E., but extending in two parallel lines over a distance of some 600 m; volcanic, with a temperature varying from 75° to 95° Fahr., and a very heavy rainfall, nearly 130 in. at the coast, and becoming greater on the higher ground; exports copra, turtle-shell, ivory, nuts, sandal-wood, and pearl-shell—total value over £30,600. Area of British portion, 8357 m; area of German portion, 4200 m. Pop estimated at 45,000, of whom 80 are whites.

Solway Firth, an inlet of the Irish Sea, between Cumberland in England, and Kircudbright and Dumfries in Scotland, with a length of 38 m., and a breadth at the mouth of about 24; very shallow, a large portion of the bottom being exposed at low water, valuable and extensive salmon and other fisheries.

Somaliland, a district of E Africa, S of the Gulf of Aden, and extending along the coast of the Indian Ocean; mountains reaching a height of over 7000 ft. run from Cape Guardafui to the S W of Abyssinia, rest undulating plateau with a good deal of desert, two rainy seasons of two or three months each. The Italian portion reaches from 49° E along the Indian Ocean to the Juba, which divides it from British East Africa, the British portion from Lahadu half-way between Jibuti and Zaila to Bunder Ziyada at 49° E, and has an area of some 60,000 m. Imports valued at £350,000, exports at £300,000. For trade *see* Berbera, Zaila, and Harrar. Regular communication with Aden. British consul-general. Pop largely nomadic and cannot be estimated.

Somerset, a county of S W England, on Severn and Bristol Channel, apples for cider, cheddar cheese, cattle-rearing, manufactures of woollens and worsteds, silk, lace, gloves, paper, earthenware, and crape, shirt-making, considerable amount of coal, a little mining of lead, iron, manganese, and ochre, sandstone and slate. Area, 1,043,485 acres. Pop 508,104.

Somme, a coast department of N. France, phosphate of lime worked, apples for cider, sugar-beet, flax and hemp, spinning and weaving of wool, cotton, linen, hemp, and silk, hosiery, carpets, &c.; bleach-print-and-dye-works, iron-founding, iron ware, beet-sugar, chemicals, paper. The river Somme (150 m) is navigable for vessels of 7 ft draught to Abbeville, and has been canalised so as to allow barges to get up as far as Amiens; canal communication with Oise and Scheldt. Area of province, 2379 m. Pop 538,000.

Sound, The, the sea passage from the Cattegat to the Baltic between Sweden and the island of Zealand, with a length of 50 m., a width varying from 3 to 28 m., and a depth of 4 to 20 fathoms; seldom frozen.

South America, the southern continent of the American system, extending from the Isthmus of Panama to Cape Horn, lying

roughly between  $12^{\circ} 25' N$  and  $56^{\circ} S$ , and between  $35\frac{1}{2}^{\circ}$  and  $81\frac{1}{2}^{\circ} W$ , and bounded N. by the Caribbean Sea, N E by the N. Atlantic, E S E by the S Atlantic, and W by the Pacific. The extreme length is about 4750 m, the greatest breadth about 3200, the coast-line about 15,600 m, and the area about 7,600,000 m. The whole of the western side is occupied by the mountains, and upland valleys and plateaux, of the Andes, from the N of which an offshoot curves round by the northern side of the Orinoco. Along the S of the lower Orinoco, and eastward, is the plateau of Guiana; and in the eastern projection between the mouth of the Amazon and the Rio de la Plata is the Plateau of Brazil. Both have mountains rising above the general level. The rest of the surface consists of great plains—wooded selvas and grassy pampas. The N is drained by the Colombian Magdalena and the Orinoco, the N centre by the Amazon and its tributaries and the Tocantins, the extreme eastern projection by the San Francisco, the S centre by the Paraguay, Paraná, and Uruguay, and their tributaries, and the rest by rivers of less importance. Except at the river mouths, and along the southern part of the W side, the coast-line is but little broken.

Southampton, a port of Hampshire, England, on Southampton Water, 12 m by rail S S W. of Winchester, 23 N W of Portsmouth, and 78 S W of London, channel with a depth of 30 ft. at low water of ordinary spring tides, double tides, which prolong the period of high water to nearly 4 hours, Empress dock has a minimum depth of 26 ft. at low water, and Prince of Wales quay a depth of 28 to 30 ft at low water, town quays 20 ft. at low water of ordinary spring tides. graving docks varying in length from 280 to 800 ft. Large warehouse accommodation, and machinery fit for dealing, in the speediest manner, with all classes of goods. The chief imports (total value over £14,000,000) are butter, bacon, and sheep or lamb's wool (all over £1,000,000), ornamental feathers, raw coffee, fresh beef, mohair, and cocoa (all between £1,000,000 and £500,000), sheep and goat skins, potatoes, eggs, scientific instruments, hewn and sawn timber, cheese, china and earthenware, barley, maize, cotton manufactures, drugs, raw pears, gutta-percha, raw hides, boots and shoes, machinery and mill work, copper manufactures, furs of all kinds, brandy, sugar, tomatoes, wine, and women manufactures (all between £500,000 and £100,000), and caoutchouc, oats, apples, raw and fruit, iron manufactures, manufactures of caoutchouc, fish of all kinds, earthenware, leather, preserved meat, and spices of all kinds, and raw materials (all between £100,000 and £50,000). The chief exports of British and Irish produce

(total value of nearly £11,000,000) are cotton piece-goods, &c, and ready-made clothing (each between £3,000,000 and £1,000,000); leather (wrought and unwrought), and manufactures of woollens and worsteds (each between £1,000,000 and £500,000), haberdashery and millinery, books, hats, chemicals and chemical preparations and medicines, general provisions, stationery other than paper, machinery and mill work, and silk yarn and manufactures (all between £500,000 and £100,000), and hardware and cutlery, cotton yarn, jute piece-goods, biscuits and bread, iron and iron and steel manufactures, silks, furs, beer and ale, jute yarn, linen manufactures, paper, and confectionery—including jams and preserved fruits—(all between £100,000 and £50,000), and there is an export of foreign and colonial produce valued at nearly £3,000,000, of which the chief articles are sheep's or lamb's wool, silk and other lace, silk manufactures, tea, sheep skins, china and earthenware, and opium and other drugs (all between £400,000 and £100,000), ornamental feathers, tin, shells, manufactured tobacco, wine, butter, cheese, and gums (all between £100,000 and £50,000). Southampton Water stretches north-westward from the junction of the Solent and Spithead for 11 m, with a width of about 2 m. Sea distance from London, 214 m, Liverpool, 470, Glasgow, 590, Leith, 500. Pop 104,911.

**South Australia**—*Surface and Size*—South Australia is the central state of the Australian Commonwealth, extending right across the continent from N to S, and bounded N by the Arafura Sea and the Gulf of Carpentaria, E by Queensland, New South Wales, and Victoria, S. by the Indian Ocean, and W by Western Australia. The line of division on the E is described in connection with the other colonies, that to the W is the meridian of  $129^{\circ} E$ . The state has a coast-line of some 2000 m, a length of 1850, a breadth of 650, and an area of 903,690 m, or 578,361,600 acres. The northern part is known as the Northern Territory, and has an area of some 523,620 m. The western part of the N coast is broken by a number of large openings including Port Darwin, and the S coast on the E has the estuary of the Murray River at Encounter Bay, the Gulf of St Vincent, and Spencer Gulf. The last runs inland for over 200 m and from its head northward are the basins of Lake Torrens and Lake Eyre. To the W of Lake Torrens is Lake Gairdner. Along both coasts are flat strips rising from sea-level to about 600 ft, and that on the S extends inland by the lakes just mentioned, and reaches half-way across to the Gulf of Carpentaria. The rest of the surface, part of the great central plateau of the continent, with considerable portions of desert, rises to a height

of from 1000 to 1500 ft, and has, in the centre and elsewhere, ridges reaching some 5000 ft. To the N of one of these, Musgrave Range near the centre of the western border, is Lake Amadeus. There is also hilly ground on both sides of Spencer Gulf, the part to the E sending off also spurs down the E. side of the Gulf of St Vincent. The first section rises to some 2000 ft, the second to some 2000 to 3000 ft. The only river of importance is the navigable Murray in the S E corner. Some smaller streams both N and S flow direct to the sea, the chief in the N being the Roper, Alligator, Daly, and Victoria, but a great many more are lost in the desert parts of the interior, or form areas of inland drainage and end in brackish lakes. In summer—December, January, and February—the mean temperature is about 73° Fahr (highest 110°), winter mean about 53°. Over a considerable part of the low district in the S E the rainfall is about 17 in, in the N it is as much as 70 in, along the coast country, diminishing inland to the line of about 20° S, while over the rest of the state there is less than 10 in. In the Northern Territory the climate on the low land is tropical, with a wet season (from November to March inclusive) during which comes the heavy rainfall (especially during January and February) accompanied by oppressive damp heat (96°). The day temperature in the middle of the dry season is about 84°.

*Government, Communications, &c*—There is a governor representing the Crown and a parliament consisting of a Legislative Council and a House of Assembly. The population is 363,000, of whom some 5000 (Chinese coolies 3000) are in the Northern Territory. There are about 5000 m of properly made roads and half as many of half-formed track. From Adelaide a railway line with several branches stretches down to the extreme S E corner of the colony and another, also with branches, goes N inland to Oodnadatta. A branch of the first gives connection with the Victoria system, and a branch of the second with the New South Wales system. It is proposed at once to proceed with the extension of the second of these main lines to meet the line in the Northern Territory from Port Darwin inland to Pine Creek (*see* Australia). The total railway mileage is about 1900 m, all the lines belonging to the state.

*Productions and Resources*—The mineral wealth of the state is great in copper, iron, and silver-lead, and there are considerable quantities of gold, bismuth, tin, manganese, and cobalt, as well as smaller quantities of antimony, asbestos, fire-clay, lignite, gypsum, china-clay, sulphur, &c. The copper is found in the S E where, though the famous Burra Burra, N of Adelaide, is no longer worked, there are the still richer Moonta and Wal-

laroo mines at the head of the York Peninsula between Spencer Gulf and the Gulf of St Vincent, Kapunda, N. of Adelaide, and Blinman, still farther N, E of Lake Torrens. Silver-lead, and gold (both alluvial and quartz) are pretty widely scattered, while iron is known to exist in large quantities, and lignite has been found at various points from 12 to 1500 m N of Adelaide. The Northern Territory has gold, silver, lead, tin, and copper. There are over 200,000 acres of forest reserves and plantations—gums, ironbarks, pines, &c., and it will probably be possible to cultivate rubber trees in the Northern Territory. Of the total area some 3,300,000 acres are under cultivation; about five-eighths of this are under wheat, and the produce now provides surplus for export. Vines do well on over 20,000 acres. The quality and strength of the wine (total produce 1,800,000 gallons) varies with soil and climate, the warmer districts producing rich and generous vintages, and the cooler and hill districts clarets and hocks. A considerable quantity of grapes are used fresh, and there is a manufacture of raisins and currants. There are also plantations of hops, figs, olives, almonds, oranges, and lemons, and a large production of honey. Olive-oil is made, and considerable quantities of fruit preserves, and mulberries are grown, in connection with efforts that are being made to produce silk, but the result is not yet of economic importance. Maize grows in the Northern Territory, and it is possible that there cotton, rubber, sugar, cinchona, cocoa-nuts, coca, and patchouli might also be produced for commercial purposes. There is a large amount of excellent pasture-land, and wool is an important product, the total number of sheep being over 5,000,000. The cattle number over 200,000, the horses 170,000, and the poultry 1,500,000, while butter for export is increasing in value. The pearl-shell fisheries off the northern coast are also valuable.

*Trade, &c*—The imports and exports are each valued at over £8,000,000, and of both nearly half comes from the other Australian states and over one-third from the United Kingdom and other parts of the Empire. The imports are chiefly textiles, colonial produce, and general goods, and the exports wool (over £1,000,000), wheat and wheat-flour (£800,000), copper, skins and hides, frozen and preserved meat, live stock, gold, wine, butter, bark, eggs, leather, and fresh fruit. The articles sent to the United Kingdom from South Australia (total value about £2,000,000) are chiefly wool (nearly half), wheat and flour (one-fifth), lead (ore, pig, and sheet), skins and furs, silver, fresh and preserved mutton, wine, leather, rabbits, dyeing and tanning substances, butter, &c. Of the articles of British produce sent to South Australia (total value about £2,000,000), the chief are iron (wrought and

unwrought), cottons, woollens and worsteds, apparel and haberdashery, manure, machinery, earthenware and china, spirits, paper, books, hats, &c., while there is a re-export of foreign and colonial merchandise valued at £170,000—silks, woollens, cottons, leather manufactures, &c. The mercantile marine has a tonnage of about 16,500, and the tonnage entered and cleared is over 1,000,000. Postage, &c., see New South Wales, and Australia.

**South Bend**, a town of Indiana, United States, on the St. Joseph River, 8½ m. by rail E.S.E. of Chicago, with manufactures of agricultural implements, wagons and carriages, iron ware, woollen cloth, paper, &c. Pop 36,000.

**Sowerby Bridge**, a town of the West Riding of Yorkshire, England, 3 m. S.W. of Halifax, with manufactures of worsted and cotton yarn, heavy woollen cloth, oil-cloth, leather, chemicals, and hardware. Pop 11,477.

**Spain—Situation and Size**—Spain is a kingdom of S.W. Europe, lying between 36° and 43° N., and between 3° 20' E. and 9½° W., and bounded N. by the Bay of Biscay and France (from which it is divided by the Pyrenees), S.E. by the Mediterranean, S. by the Mediterranean, S.W. by the Atlantic, and W. by the Atlantic and Portugal. The extreme length from N. to S. is about 560 m., the greatest width 650, the area 197,670, and the coast-line about 1400. The surface is mainly a tableland with a mean elevation of some 2000 ft., and with mountain ridges in various ranges (running mostly from E. to W.) to heights of from 5000 to 8000 ft. The only low ground is in the narrow coastal strip, along the Ebro basin in the N.E., and along the basin of the Guadalquivir and the upper waters of the Guadiana in the S.W. The drainage of the N.E. is carried off by the Ebro and its tributaries, of the N.W. by the Minho and short streams flowing to the Bay of Biscay, and of the rest of the country by the Douro, Tagus, Guadiana, and Guadalquivir, all flowing to the Atlantic, and by a number of smaller streams flowing to the Mediterranean. The N. has a rainfall of 40 to 156 in., and a temperature ranging from 26° Fahr. to 85°. On the plateau the rainfall diminishes to 10 to 20 in. (in summer almost none), and the temperature ranges from 14° to 104°; while the Mediterranean districts are among the hottest and driest in Europe, and have a mild winter. The highest tops of the Pyrenees and Cantabrian Mountains in the N., the Guadaramas in the centre, and the Sierra Nevada in the S., rise above the snow-line.

**Government, &c.**—The government is a hereditary constitutional monarchy with a legislative Cortes consisting of a Senate and a Congress, the deputies in the latter being one for every 50,000 of the pop. The pop. numbers 18,089,500, of whom over 63 per cent. are engaged in agri-

culture, and over 12 per cent. in mining and manufactures, &c. There are good roads in some districts, and a few canals; while there are now over 6000 m. of railway, mostly belonging to private companies.

**Productions and Resources**—Of the total area some 60 per cent. are under culture, of which half is given up to farms, there being a very large number of small proprietors, nearly 1 per cent. are under vines, over 1½ under olives, and over 20 under fruit. To this productive area there falls to be added 20 per cent. of the whole surface where the natural grass is suitable for grazing. Along the S.E. some 1500 m. require irrigation. Galicia has cattle; Estremadura and farther S., sheep and swine; and the chief crops are wheat, barley, rye, oats, maize, flax and hemp, clover, onions, garlic, tomatoes, sugar-beet, saffron, amaranth, &c. The trees and shrubs include oranges, almonds, hazels, chestnuts, walnuts, oaks (cork oaks, &c.), mulberries, pomegranates, lemons, &c. The production of wines and raisins is very important, and so also are the olive and orange and other fruit crops, the export of the first (of both the strong red wine of the N., and the cherries of the S.) being valued at £4,000,000. The country is very rich in minerals—lead, iron, coal and lignite, copper, quicksilver, zinc, salt, manganese, and sulphur. The copper ore, iron ore, silver-lead ore, lead ore, and coal have each an annual value of from about £1,800,000 to £1,000,000, and the smelted lead, copper, silver-lead, steel, wrought iron, and silver, produced are valued each at from £1,800,000 to £500,000. The other industries include spinning and weaving of cottons, woollens, and linen, in the N.E., of linen in N.W.; making of leather in the N.E.; and along the Mediterranean provinces are cork-cutting, and the making of paper, silk, and sugar, while in various districts are manufactures of tobacco, soap, glass, chocolate, brandy, &c. The sardine and cod fisheries of the N., and the tunny fisheries of the S.E. are also important, the total value being over £1,500,000 (sardines, £800,000).

**Trade, &c.**—The total imports are valued at about £34,000,000, and the exports at £28,500,000 (one-third ores and pure metals). Of the former the chief are cotton and other raw material, sugar, dried and salted cod, cacao and other comestibles, machinery, tobacco, coal, petroleum, &c., and of the latter minerals and metals, wine, fruits and preserves, olives and olive-oil, corks and cork bark, silks, wool, &c. Of the imports 28 per cent. come from the British Empire, 15 from France, 14 from the United States, 8 from Germany, and 5 from Russia, while of the exports 39 per cent. go to the British Empire, and 29 to France (one-quarter of it wine). The exports of British produce to Spain are valued at over £5,000,000, the chief articles being coal (nearly one-third),

machinery, iron (wrought and unwrought), manures, cottons, woollens, wool (noils, waste, &c), soda compounds, and linen yarn, and there is a re-export of foreign and colonial merchandise (largely raw cotton, maize, wheat, tin, and tallow), of the value of £700,000. The imports to Great Britain from Spain are valued at some £15,000,000, the chief being iron ore, copper (regulus and precipitate), lead (pig and sheet), and pyrites (iron and copper)—all between £4,000,000 and £1,000,000, wine, raw grapes, raisins, onions, quicksilver, esparto and other paper-making materials, almonds, cork, nuts, silver ore, miscellaneous fruits, and olive-oil—all between £700,000 and £1,000,000, tomatoes, preserved fruits, and dye and tanning substances. Spain has a clearance of 14,000,000 tons in the foreign trade (57 per cent British), and of 12,000,000 tons in the coasting trade, and it has a mercantile marine of 775,000 tons. There is a British consul-general at Barcelona, consuls at Bilbao, Cadiz, Corunna, and Malaga, and a number of vice-consuls and consular agents. Mails from and to London twice daily, letters, 2½d per half-cz, postcards, 1d, parcels, *ad* France, to places having railway stations, not over 6½ lbs, 2s, telegrams, 3½d a word.

*Money, &c*—The coin of account is the peseta = 100 centesimos = a franc nominally, but in reality about one-fifth less. The metric system is legal, but the old weights and measures are still common, the quintal = 101.4 lbs avoirdupois, libra = 1.014 lb, tonelada = 50 quintals, wine arroba = 3½ gallons, oil arroba = 2½ gallons, vara = 3 ft, fanega = 1½ bushel. The Spanish flag has a yellow ground across which run two horizontal red bars, the naval ensign has a red bar at top and bottom with a yellow centre, on the flagstaff side of which is a circle, half red and half white, surmounted by a crown. On the red half is a tower, and on the white a red lion.

**Spalato**, or **Spalatro**, a town of Dalmatia, Austria-Hungary, with manufactures of maraschino and rosoglio, woollens, silks, &c, harbour, 13 to 25 ft, exports wine, olive-oil, fruit, cattle, sheep, &c. Pop about 20,000.

**Spezia**, a port of Liguria, Italy, 56 m by rail S E of Genoa, Italian arsenal and naval station with an anchorage of 5½ fathoms, and a small commercial harbour which takes vessels up to 11 ft, imports (£700,000), coal, wheat, lead and lead ores, machinery, iron and steel, timber, phosphates, &c, exports (£60,000), lead, marble, wine, timber, casks, &c. The United Kingdom sends half the imports and takes more than half the exports. Of 700,000 tons entered and cleared 500,000 are Italian, and 150,000 British. British vice-consul. Pop 25,000.

**Spithead**, an anchorage on the S coast of England, between the S E side of the Isle of Wight and the mainland, length about 14 m, average breadth about 4 m.

**Spokane**, a town of Washington, United

States, 481 m by rail N E of Portland, Oregon, with a large trade in lumber, and saw mills and flour mills. Pop 37,000.

**Springfield**, a town of Illinois, United States, 185 m by rail S W of Chicago, railway centre; coalfield, manufactures of iron and steel, watches, woollens, paper, pulp, flour, &c. Pop 34,500.

**Springfield**, a town of Massachusetts, United States, on the Connecticut River, 100 m by rail W. by S. of Boston, with a government arsenal for manufacture of rifles, and manufactures of iron ware, cars, machinery, cottons, woollens, paper, buttons, needles, locks, skates, organs, &c. Pop 62,000.

**Stafford**, a midland county of W England, with a chief town of the same name; drained by Trent and its tributaries, large deposits of coal in N and S, the former area being almost entirely covered with towns engaged in the manufacture of earthenware and china, and known as the Potteries. In the S, which is known as the Black Country, there are large manufactures of iron and iron ware, the principal articles made being those in which a large amount of labour is expended in connection with a small amount of material, so that carriage, when the finished articles are sent away, is not large in proportion to the value of the manufactured goods—locks, nails, chain cables, anchors, spurs, saddlers' fittings, bits, keys, tin-plates, &c. Gypsum and salt are also worked, and a small amount of copper, while Burton is famous for its beer, and there is a little manufacture of silk at Leek. The county town, Stafford, on the Sow, 28 m by rail N N W of Birmingham, has manufactures of boots and shoes. Area of county, 749,601 acres. Pop. 1,234,382, pop of town, 20,894.

**Stalybridge**, a town of Cheshire, England, on the Tame, 7 m. E by N of Manchester, and on the Huddersfield Canal, with spinning and weaving of cotton, and manufactures of machinery and iron ware. Pop 27,674.

**Stamford**, a town of Connecticut, United States, 33 m by rail N E of New York, with which there is also steamboat communication by Long Island Sound, manufactures of iron and bronze ware, Yale locks, &c. Pop 16,000.

**Stassfurt**, a town of the province of Saxony, Prussia, 22 m by rail S by W of Magdeburg, with enormous deposits of chloride and sulphate of potash, and rock salt, which has given rise to great chemical works, producing potassium, glauber salts, saltpetre, &c. Pop 20,000.

**Stavanger**, a port on the W coast of Norway, 100 m S of Bergen, with deposits of phosphate of lime and infusorial earth in neighbourhood, depth of entrance from 37 to 80 ft, and of the harbour over 60 ft, at quays 14½ ft to 17½, imports grain, coal, salt, textiles, and provisions and general goods, exports herring, anchovies, lobsters, salmon, mackerel, cheese, marble, phosphate of lime, infusorial

earth, &c Regular communication from Hull; distance from Hull, 510 m; the Tyne, 340 British vice-consul Pop 31,000

Stavropol, a government of Caucasus, Russia, with a chief town of the same name, cattle, sheep, and horses, vines and flax, trade in tallow and hides The town has railway communication with Rostov, and exports grain, cattle, sheep-skins, tallow, &c Area, 23,398 m Pop 876,500, pop of town, 42,000

Stettin, a port of Pomerania, Prussia, on the Oder, 30 m from the Baltic, and 60 m by rail N E of Berlin, depth on bar and in channel 22 ft, and three ice-breakers keep navigation open all winter, shipbuilding, oil-refining, and manufactures of cement, sugar, paper, matches, chemicals, ready-made clothing, flour, machinery, &c, imports (total value over £7,500,000), coal, petroleum, grain, coffee, herring, chemicals, cotton, oil-seed, iron ore and pyrites, iron and steel, phosphates, china-clay, timber, wool, hides, agricultural machinery, guano and other manures, &c, exports (total value about £7,500,000), sugar, spelter, iron, zinc, grain and flour, timber, cement, rape-seed oil and cake, salt, potatoes, rags, bones, pit-props, ready-made clothes, &c Great Britain sends over 30 per cent of the imports, and receives about 27 of the exports Of 3,000,000 tons entered and cleared nearly one-seventh is British There is connection with Berlin by the Oder, Finow Canal, and Havel The Stettiner Hafl, outside the port, is a great shallow lagoon stretching along the coast Regular communication from London, Hull, the Tyne, Leith, Manchester, Swansea, and Bristol Distance from London, 900 m, Hull, 790, the Tyne, 750, Leith, 780, London, by Kaiser Wilhelm Canal, 600, Leith, 650 See Swinemünde British consul Pop 211,000

Stevenston, a town of Ayrshire, Scotland, 28 m by rail S W of Glasgow, and 2 by rail from Ardrossan, with coal mines in the neighbourhood, blast-furnaces, iron works, and the great factories of Nobel's Explosives Company (dynamite, gelignite, blasting gelignite, cordite, gun-cotton, &c) Pop 6554

Steyer, or Steyr, a town of upper Austria, at the junction of the Steyr and the Enns, 36 m by rail S by W of Lanz, chief centre of iron and steel manufactures of Austria (fire-arms, cutlery, chains, and iron and steel ware), and making of paper and leather Pop 18,000

Stilton, a parish of Huntingdonshire, England, a short distance S W of Peterborough, giving name to the well-known cheese, which is, however, made mostly in Leicestershire

Stirling, a midland county of Scotland, with a chief town of the same name, large deposits of coal and iron, with iron works, and manufactures of woollens, cottons, chemicals, &c The town, 36 m N W of Edinburgh, and 99 N N E. of Glasgow, is very important his-

torically, and has manufactures of woollens (carpets, tartans, shawls, tweeds, &c) and agricultural implements, the spinning of woollen yarn, and the making of rubber goods. Area of county, 288,842 acres Pop 142,291, pop of town, 18,697

Stockholm, the chief town of Sweden, on Lake Malar, an inlet of the Baltic, 40 m. up from the sea, and 1284 m. (rail, &c) from London, manufactures of sugar, tobacco, iron and steel, silk and silk ribbons, linen, cotton, leather, &c; harbour takes vessels up to 26 ft. draught, but has the disadvantage of being frozen for 3 to 4 months in winter, imports coal, grain (wheat, rye, maize, and rice), herring, oil, oil-cake, salt, cork, iron (pig and rails), and provisions and general goods, exports oats, iron and steel, iron ore, timber, tar, wood-pulp, wood ware, butter, zinc ore, &c Letters, 2 days, parcels, 4 Regular communication from London, Hull, the Tyne, and Manchester Distance from London, 1120 m, Hull, 1005, the Tyne, 980, Leith, 1050 British consul Pop 301,000

Stockport, a town of Cheshire, England, 16 m by rail (but 6 in direct line) S S E of Manchester, at the junction of the Tame and Goyt to form the Mersey, with large manufactures of cottons and cotton yarn, printing and bleach works, felt hats, making of machinery and iron and brass ware. Pop 78,871

Stockton-on-Tees, a port of Durham, England, on the Tees 4 m up from the sea, 11 m by rail E N E of Darlington, and 4 W S W of Middlesborough, with blast-furnaces, and foundries, shipbuilding, engine works, and earthenware, depth on bar 19 ft., imports iron ore, exports iron and iron and steel manufactures, machinery, and mill work Pop 51,476

Stoke-upon-Trent, the chief town of the pottery district of Staffordshire, England, on the Trent, 15 m by rail S E of Crewe, and 16 N of Stafford, with canal communication with the Mersey and Trent, coalfield, manufacture of iron and machinery, and extensive manufacture of earthenware, china, encaustic tiles, tessellated pavement tiles, &c Pop 30,456

Stolp, a town of Pomerania, Prussia, 75 m by rail W by N of Danzig, with manufactures of machinery and iron ware, amber ware, and trade in timber, and fish Pop 27,500

Stornoway, a port in the island of Lewis, Outer Hebrides, W coast of Scotland, with important fisheries Pop 3852, more than doubled in fishing season in May and June

Stourbridge, a town of Worcestershire, England, on the Stour, 12 m by rail W by S of Birmingham, coal mines, and iron manufactures (nails, chains, &c), making of glass, earthenware, fire-bricks, &c Pop 16,302

Stourport, a town of Worcestershire, England, on the Severn, 4 m by rail S S W of Kidderminster, and on the Staffordshire and Worcestershire Canal, manufactures of carpets,

iron ware, tin-plate and tin ware, enamel ware, and leather Pop 4529

**Straits Settlements**, a British crown colony of south-eastern Asia, including Singapore, Penang, Malacca, Cocos-Keeling Islands, Christmas Island (all of which are separately noticed), as well as the protectorate of the Federated States (native) of the southern half of the Malay Peninsula—Perak, Selangor, Negri Sembilan, and Pahang—while Johore in the extreme S has its foreign relations controlled by Great Britain. The surface is flat along the coast but hilly inland as the mountain range (10,000 ft.) that traverses the whole peninsula passes down to the W of the centre, lessening in height as it goes southward. There are many large streams, and the whole country is gradually being opened up by roads, while there are one or two short railways. Perak, in the extreme N.W., with an area of 10,000 m., and a pop of 329,000, produces tin, sugar, and rice, and rubber and ramie are being tried. Pahang, S.E. of Perak with an area of 10,000 m., and a pop of 83,500, has gold, tin, and lead. Negri Sembilan, N. of Malacca, with an area of 4000 m., and a pop of 96,000, has tin, gold, coffee, tapioca, gambier, and rice. Selangor, between Perak and Negri Sembilan, with an area of 3200 m., and a pop of 168,000, has tin, coffee, rice, and pepper; and rubber and cocoa-nuts are being tried. Johore, in the extreme S, with an area of 9000 m., and a pop of 200,000, produces gambier, pepper, sago, rattans, and damar, and tobacco, coffee, tea, and cacao are being tried, iron (unworked) abounds, and tin and gold are worked to a very small extent. All the states import rice, opium, provisions, and live stock, and the total export of tin and tin ore (mainly from Perak), are valued at some £3,000,000. Straits Settlements mails from and to London every week, letters, 1d per half-oz, postcards, 1d, parcels, *via* Marseilles, under 3 lbs., 1s, between 3 and 7, 2s.; between 7 and 11, 3s., *via* Brindisi, 1s more, money orders to and from, telegrams, *via* Turkey, 3s 4d a word, other routes, 3s 6d.

**Stralsund**, a port of Pomerania, Prussia, on the W. side of Strela Sound between Rugen and the mainland, 67 m by rail N.W. of Stettin, manufactures leather, sugar, starch, and oil, harbour takes vessels up to 15 ft draught, imports petroleum, timber, linseed, and general goods; exports grain, sugar, fish, and wool. Distance from London, 790 m, Hull, 690, the Tyne, 660, Leith, 690 Pop 31,000

**Stranraer**, a port of Wigtownshire, Scotland, at the head of Loch Ryan, 5½ m by rail N. of Port Patrick; mail steamers daily to Larne, in Ireland (39 m, 2½ hours); distance to Glasgow, 88 m; Liverpool, 148 Pop 6036

**Strasbourg**, the chief town of Alsace-Lorraine, Germany, on the Ill, 1½ m. from the W. bank of the Rhine (on the canals connecting

the Rhine and Rhone, and the Rhine and Marne), 88 m by rail N. of Basel, 131 S of Mayence, and 523 (rail, &c) from London; trade in coal, leather, iron, grain, timber, hops, and provisions, machinery and hardware, pianos and organs, jewellery, tobacco, furniture, and chemicals, dye and print works; *pâte-de-force-gras*. Letters, 17 hours, parcels, 27. Pop 151,000

**Stroud**, a town of Gloucestershire, England, on the Frome, 10 m by rail S E of Gloucester, with extensive manufactures of woollens, and large dye-works; ready-made clothing, walking sticks, and sticks for umbrellas. Pop 9188

**Stuttgart**, the chief town of Wurtemberg, on the Nesenbach 2 m up from the Neckar, and 190 m by rail W N W of Munich, with a great book trade, a trade in hops, horses, and woollens, and manufactures of textiles, pianos, parquet flooring, chemicals, artists' colours, chocolate, cigars, furniture, &c. British consul Pop 177,000

**Styria**, a duchy of Austria, to the S of Upper and Lower Austria, and with Hungary on the W.; mountainous, drained by the Enns, Mur, Drave, and Save. Half the area is covered by timber, a quarter by pasture land, and rather less than a quarter is under cultivation, cattle, swine, and horses; large deposits of iron and salt, and anthracite coal, graphite, and zinc are worked, as well as a little silver and lead, iron smelting, and manufactures of iron and steel (machinery, scythes, wire, agricultural implements, &c.) Area, 8670. Pop 1,356,500

**Suakin**, or Suakin, a port of Egypt, partly on an island near the middle of the W. side of the Red Sea, important trade route for the Soudan, with an anchorage in 4 to 5 fathoms close to the shore, and a harbour taking the largest vessels, and having a depth of 20 ft. at the government quay; imports dhurra, cottons, iron and hardware, coal, flour, sugar, rice, dates, and ghee, exports gum arabic, millet, cattle, hides, cotton, ivory, &c. Pop 10,000

**Sudbury**, a town of Suffolk, England, 17 m by rail N of Colchester, and 68 N E. of London, cocoa-nut matting, silk, velvet, &c. Pop 7109

**Sudbury**. See Ontario

**Suez, Isthmus of**, a narrow neck of land (sand, rock, and salt marsh) connecting Asia and Africa. It is crossed by the *Suez Canal*, which was constructed in 1859-69 at a cost of over £20,000,000. The total length of the waterway is 100 m, of which 28 in the N are through Lake Menzaleh, 11 through Lake Ballah, 5 through Lake Timsah, and 23 through the Bitter Lakes. It is being deepened to 31 ft., the surface width made 420 ft., and the bottom width 108 ft. The deepest draught taken is 26 ft. 3 in. Electric light enables the passage to be made by night. Some 3700 vessels, with

a gross tonnage of over 15,000,000, pass through every year, and of these over 57 per cent are British, 16 German, 7 French, and 4.75 Dutch. The duration of passage varies from 17½ hours to 22½. The town of Suez near the S opening of the canal has at Port Ibrahim a good harbour with a depth of 24 ft, total trade over £1,200,000, of which considerably more than half is import, one-fourth export, and the rest goods in transit or re-exported, imports coal, gunnies, indigo, spices, coffee, petroleum, textiles, carpets, and chemicals and perfumery, exports ivory, ostrich feathers, skins and hides, sugar, gum, cottons, silk and silk thread, and eggs, re-exported goods are largely cigarettes. Of the total trade half is with the British Empire, and of 140,000 tons entered and cleared over 85 per cent. are British. Regular communication from London. Letters, 5½ days. Distance from London, 3380 m., Liverpool, 3300, Glasgow, 3410, Cardiff, 3200. British vice-consul. Pop 18,000.

**Suffolk**, a county of SE England, with a coast-line of about 50 m along the North Sea, wheat, barley, horses and sheep, deposits of coprolites worked for manure. Area, 952,709 acres. Pop 384,198.

**Sulina**, a port at the mouth of the branch of the Danube with the same name, depth on bar and at quays, 24 ft, trade nearly one-third of whole lower Danube ports, imports all kinds of general goods, and exports wheat, maize, barley, rye, rape seed, haricots, millet seed, oats, and hemp seed. Of the vessels cleared 45 per cent are British. Regular communication from London. Distance from London, 3340 m., Liverpool, 3270, Glasgow, 3380. British vice-consul. Pop 5000.

**Sulu Islands**, a group of over 160 small islands, between Borneo and the Philippines, teak, iron-wood, and other valuable timber trees, cocoa-nut palms, sugar-cane, rice, and tobacco, export edible birds-nests, pearls and pearl-shell, and trepang. Area, 1000 m. Pop 80,000.

**Sumatra**, a great island of the Malay Archipelago, belonging to Holland, separated from Malay Peninsula by Strait of Malacca, and from Java by Sunda Strait, length over 1100 m., breadth over 270, and area 170,000, lines of mountains (volcanic) lengthwise along SW, reaching heights of from 11,000 to 12,000 ft, from this the greater part of the NE undulates rapidly down to marshy and sandy plains, temperature in low ground 80° Fahr, and rainfall everywhere heavy—some 90 in, seasons differ in parts N. and S of the equator. Short railway from Padang to coalfields. Dense forests with teak, oak, and other timber trees, produces rice, maize, sugar, coffee, pepper, millet, sago, cocoa-nuts, tobacco (Delh, Langkat, Serdang, and Assahan—fine silky leaf, light and strong, excellent outside wrapper for cigars), betel, camphor, benzoin, gutta-

percha, turmeric, ginger, gums, and rattans; petroleum (Langkat), cori (Ombelin near centre, and elsewhere), and gold (all along the mountains), are worked in considerable amount, and tin, iron, salt, sulphur, &c, are found, imports textiles, rice, opium, salt, salt fish, metal wares, earthenware, &c, exports the chief of the productions given above—tobacco, coffee, cocor-nuts, and pepper, being the most important. Regular communication from London. Postage as for Java, telegrams, and Turkey, 4s. 2d a word; other routes, 4s 5d. Pop 3,500,000.

**Sunderland**, a port of Durham, England, at the mouth of the Wear, 12 m by rail SE of Newcastle-on-Tyne, with large iron-works, a great amount of shipbuilding, bottle and glass works, making of anchors and chains, paper mills, chemical works, &c.; depth in channel 25½ ft. at high water of spring tides, and 22 ft at high water of neaps, the docks have a depth of from 20 to 28 ft at high water of spring tides, and of 17 to 24½ at high water of neaps, the graving docks vary in length from 300 to 440 ft, and have a depth on sill of from 15½ to 19½ ft at high water of spring tides, imports (total value over £600,000), hewn and sawn timber and pit-props, &c (about half of the total), wheat, esparto grass, &c, petroleum, and barley, exports (total value over £2,000,000), almost entirely coal, coke, and patent fuel, and there is besides a large coast export of coal (total over 2,000,000 tons), bottles and glass, earthenware, chemicals, iron, lime, cement, &c. Pop 146,565.

**Sundsvall**, a port on the E coast of Sweden, on the Gulf of Bothnia, 80 m N by W of Stockholm, and 290 m by rail from Trondhjem, with iron works, and saw mills, harbour takes largest vessels, imports machinery and implements, iron, salt, coal, ships' stores, provisions, and general goods, exports wood (deals, battens, and spars), tar, iron and other ores, iron, and wood-pulp. Of over 500,000 tons less than one-tenth are British. Regular communication from London and Manchester. British vice-consul. Pop 15,000.

**Superior Lake**, the largest of the great lakes of North America, and the one farthest to the W, the largest fresh water lake in the world, with an extreme length of about 410 m, a breadth of about 170 m, a mean depth of about 470 ft, and a maximum depth of over 1000 ft, surface a little over 600 ft. above sea-level, and about 20 ft. above Lakes Huron and Michigan, by the ship canals at Sault Ste Marie there is continuous navigation from the head of Lake Superior to the sea, a distance of close on 2400 m, storms violent, the waves rising at times to a height of over 16 ft, excellent fishing, and large amount of shipping trade. Area, 31,200 m, drainage area, 83,000 m.

**Surabaya**, a port on the NE coast of Java, with a Dutch arsenal and manufacture of sugar,

and furniture: exports sugar, coffee, rice, and tobacco. British vice-consul. Pop. 143,000.

Surat, a town of Bombay, India, in a district of the same name, on the S. side of the Tapti 14 m. up, and 160 m. by rail N. of Bombay, with manufactures of cotton, silk, brocade and embroidery, and export of cotton. Pop. 119,500.

Surrey, a county of England, on the S. side of the Thames, and including the greater part of the S. side of London, market gardens, nurseries, hops, distillation of scents, and beds of fuller's earth. Area, 485,128 acres. Pop. 2,038,923.

Sussex, a county of S.E. Eng. and, with a coast-line of about 90 m. along the English Channel, coast flat, surface undulating inland by the grassy Downs to an extreme height of from 600 to 850 ft.: sheep, cattle, and horses: gypsum. Area, 933,239 acres. Pop. 635,052.

Sutherland, a county of the N. of Scotland, extending from the Atlantic to the Moray Firth; sheep; salmon, herring and other fisheries: deer forests and grouse moors; a little lignite worked at Broma: alluvial gold but hardly in paying quantities. Area, 1,297,849 acres. Pop. 21,440.

Swansea, a port of Glamorganshire, Wales, at the mouth of the River Tawe, 45 m. W. of Cardiff, and 295 m. by rail W. of London: harbour takes the largest vessels: docks have a depth of water of from 23 to 32 ft. on sill, and the graving docks, 156 to 480 ft. in length, have 7 to 24 ft. on sills; great copper-smelting and tin-plate manufactures, and smelting to a large extent of almost all other metals of commercial value. The tin-plate trade suffered severely by the adoption of the McKinley Tariff in the United States but is still very large and thriving. Imports (total value about £4,500,000), copper regulus and precipitate (nearly half of the whole), copper ore (about £500,000), unwrought copper, wheat, iron ore, iron and copper pyrites, zinc ore, refined sugar, and hewn and sawn timber (all between £300,000 and £100,000): maize, unwrought steel, and barley (all between £100,000 and £50,000): and lead ore, silver ore, crude zinc, tin and nickel ore, &c., sulphur, phosphates, asbestos, and raw vegetables. Exports (total value nearly £5,000,000), iron and iron and steel manufactures (mainly tin-plates and tinned and black plates—over a third of the whole); coal (with coke and peat fuel), and wrought and unwrought copper (each between £2,000,000 and £1,000,000): zinc, alkali, superphosphate, arsenic, and machinery and mill work. Sea distance to Liverpool, 240 m.; Glasgow, 350. Pop. 24,514.

Swatow, a seaport of Kwangtung E. China, on the N. bank of the Han-kiang, near the mouth and 225 m. E. of Canton: within the typhoon region: vessels of 13 to 14 ft. can reach the place at any time, sugar-refining and manufactures of bean-cake and grass-

cloth; imports (total value over £4,500,000), bean-cake and beans, cottons, opium, rice, miller, hemp, kerosene, metals, silks and woolsens, and wheat; exports (total value over £2,000,000), sugar—nearly half—paper, tobacco, nankeens, grass-cloth, tea, earthenware, fruit, fish, beans, clothing, &c. Regular communication from London and Middlesbrough. British consul. Pop. 38,000.

Swaziland, a portion of British South Africa, in the S.E. of the Transvaal Colony: surface a plateau, drained by the Komati and tributaries, and the Maputa; climate healthy: grazing for sheep and cattle. Tin and coal will probably be of importance in the future; gold is found over a considerable area, but the prospects of profitable working are said to be at present not very promising. Area, 8500 m. Pop. estimated at about 42,000, of whom probably not more than 1200 are whites.

Sweden, a country of north-western Europe, along the E. side of the Scandinavian Peninsula: lying between 55° 20' and 69° N., and between 11° and 24° W.; and bounded N.E. by Russia: E. by Russia, the Gulf of Bothnia, and the Baltic: S. by the Baltic: S.W. by the Sound, the Categat, and the Soger Rack: and W.N.W. by Norway. It has an extreme length of about 1000 m., an extreme width of 300 m., a coast-line of some 1600 m., and an area of 172,876 m., of which 3516 m. are occupied by lakes, Wener, Wetter, Mälaren, and Hjelmaren. The surface is undulating slope from the Norwegian hills to the sea, the first third of the whole reaching down to 800 ft., the second to 300 ft., and the third to the coast. The drainage is carried off by a series of rivers running roughly parallel to one another in the direction of the slope—the Torneå and its tributary the Muonio (which form the boundary with Russia), Kalix, Luleå, Piteå, Skellefteå, Umeå, Angerman, Indals, Dal, and smaller streams flowing to the E.; and the Göta, and smaller streams flowing to the Categat. The northern portion (Normland), extending north from an irregular line across between 63° and 64°, is a great range of forests—pine, fir, birch, &c.—and with iron, copper, and other minerals of which only the iron is yet worked. To the S. of this comes Scania, with the four great lakes already mentioned, forests of fir, oak, ash, &c., rich deposits of iron and copper, and in smaller quantity silver, manganese, nickel, zinc, cobalt, &c.—all worked. Gothenburg in the S. has a flatter surface, and owing to this and the milder climate, there is more cultivation. Iron abounds, and in Scania, in the extreme S. there is a small coalfield with an output of 250,000 tons. The climate is very variable, but is severe in the higher parts, where in the N. there is ice on the lakes for seven months in the year, and in the S. for nearly three. The rainfall is greatest in the

S W where it reaches 30 m., and from that it diminishes eastward and northward to 16 m.; but the rivers are well supplied in summer by the melting snow from the border mountains.

*Government, &c*—Sweden is a hereditary monarchy. The sovereign, who must be a Lutheran, has legislative power in affairs of political administration, but in other matters legislation is carried out by a Diet with First and Second Chambers, the former of 150 members, and the latter of 230. The pop is 5,136,500, of whom over 50 per cent are engaged in agriculture, some 16 in manufactures and trade, nearly 5 in connection with mining and metal works, 2 in connection with timber, and less than 1 in fishing. There are some 6700 m of railway, of which about one-third belongs to the state, and in the S are the Göta and other canals. See *Wener*.

*Productions and Resources, &c*—Though half the population is concerned in agriculture, only  $8\frac{1}{2}$  per cent. of the area are cultivated, and  $3\frac{1}{2}$  under natural grass. Over 80 per cent. of the farms are under 25 acres. The forest area is nearly 50 per cent, and timber and minerals are, as has been already indicated, the chief sources of wealth. Over 2,500,000 tons of iron ore are raised, of which two-thirds are exported, while over 500,000 tons of pig-iron are made, and some 400,000 tons of bar iron. The production of copper ore is over 22,500 tons, of zinc ore over 60,000, of manganese ore over 2600, and of silver and lead ore 23,000. The chief industries are connected with the mineral and timber trades, but there are likewise manufactures of sugar, cotton, tobacco, paper, matches, glass, leather, papier-maché, woollens, &c. There are fishermen scattered thinly along the coast, the fish caught being herring, mackerel, haddock, cod, &c. The leading imports (total value £28,000,000) are coal, machinery and other metal goods, corn and flour, raw textile materials and yarn, textiles, colonial produce, live stock and animal foods, animal products, brandy, wine, and spirits; manure, mineral oils, salt, &c. The exports (total value, £20,000,000) are timber, wood-pulp, matches, iron and steel, iron ore, zinc ore, paper, butter, oats, &c. Of the imports Germany sends  $36\frac{1}{2}$  per cent, the British Empire  $30\frac{1}{2}$ , Denmark 12, Russia  $5\frac{1}{2}$ , and Norway 4, while of the exports the British Empire takes  $43\frac{1}{2}$  per cent, Germany 14, Denmark 12, France 8, and the Netherlands 7. The total imports to the United Kingdom from Sweden are valued at some £10,000,000, the chief articles being timber (one-half), butter (one-tenth), wood-pulp and paper (each between £900,000 and £500,000), pig-iron, bar-iron, puddled-iron, steel and iron and steel manufactures, matches, joinery and other manufactures of wood, machinery, oats, and glass (all between £500,000 and £100,000); and

scientific instruments, and iron ore. The exports of British produce to Sweden are valued at £5,000,000, chiefly coal (one-third), iron (wrought and unwrought), cottons, wool (wools, &c.), machinery, woollen and worsted yarn, woollens and worsteds, copper (wrought and unwrought), chemicals, manures, unwrought tin, oil and floor cloth, &c, and there is a re-export of foreign and colonial merchandise of £1,000,000, chiefly cotton, leather, linseed, bacon and hams, coffee, caoutchouc, and hardware. The total tonnage entered and cleared is about 17,000,000, and the mercantile marine is about 600,000 tons. There are British consuls at Stockholm and Gothenburg, and vice-consuls at all the chief, and many of the smaller, ports with which the coast is studded. Mails from and to London twice a day, letters,  $2\frac{1}{2}$ d per half-oz; postcards, 1d; parcels, under 3 lbs., 1s 2d., between 3 and 7, 2s 3d; between 7 and 11, 2s 11d; money orders to and from; telegrams,  $3\frac{1}{2}$ d a word. For money, and weights and measures, see Norway. The Swedish flag is blue with a yellow St George's cross, and the upper compartment, next the staff, has blue and red triangular panels (blue at sides—division lines of compartment from corner to corner), with a cross formed by a blue vertical bar and a yellow horizontal bar. The naval ensign is the same, only peaked at the outer edge; and the royal standard has in addition the royal arms at the centre of the yellow cross.

*Swindon*, a town of Wiltshire, England, 77 m. by rail W of London, with the works of the Great Western Railway. Pop 44,996.

*Swinemunde*, a town of Pomerania, Prussia, on the island of Usedom, near the mouth of the narrow channel (Swine) connecting the Stettiner Haif with the Baltic, 24 ft of water at entrance and at quays, good railway communication, extensive fishing; imports coal, herring, petroleum, chalk, &c, exports cement, sugar, bricks, &c. Distances, 40 m less than to Stettin. British vice-consul. Pop 10,500.

*Switzerland*, or the *Swiss Confederation*, a republic of central western Europe, lying between  $45^{\circ} 48'$  and  $47^{\circ} 48'$  N, and between  $5^{\circ} 57'$  and  $10^{\circ} 29'$  E, and bounded N by Germany, E by Austria-Hungary, S by Italy, and W by France. The greatest length is 215 m., the width 137 m., and the area 15,976 m. The surface is mountainous, the N W being occupied by part of the Jura, and the rest by part of the Alps. The lowest point is 646 ft at Lake Lugano on the Italian border, and the highest 14,775 at the Matterhorn, also on the Italian side. The drainage of all the northern two-thirds is carried off by the Rhine and its tributary the Aar, with the smaller rivers (Limmat, Reuss, &c) flowing to the latter, of the S W by the upper waters of the Rhone, and of the S E by the upper waters of the Ticino (Po), and the Inn (Danube). There

are many lakes, of which the chief are Constance (Rhine), Zurich, Zug, Lucerne, Thun, Neuchâtel, &c (Aar), Geneva (Rhône), and Maggiore and Lugano (Ticino). The climate necessarily varies with the height, but the mean temperature in the lower valleys is about 50° Fahr, rainfall from 35 to 100 in.

*Government, &c*—The government is a federal republic of twenty-two cantons, with a president and a Federal Assembly, the latter made up of the State Council (2 members from each canton), and the National Council (147 members, 1 for each 20,000 inhabitants, the proportion to cantons varying from 27 for Berne to 1 each for Uri and Zug). The chief passes giving access to the country are mentioned in the article on the Alps, and within the republic itself there are some 2400 m of railway all belonging to the state, besides some 200 m of tramway, rack, and cable, lines. The pop is 3,315,500, of whom 38 per cent are dependent on agriculture, 38 on industries, and 11 on trade and transport, &c.

*Productions and Resources*—There are very many (nearly 300,000) peasant landowners, and of the whole area a little over 70 per cent is productive. Of this portion 36 per cent is meadow or pasture land, 29 forest, 19 under fruit, and 16 under crops (rye, oats, potatoes, &c) and gardens. More than half of the forest area, between the eastern end of the Lake of Geneva and the northern end of the Lake of Constance, is now very carefully conserved by the Federal government, as excessive cutting was threatening to cause climatic disturbance. The grazing is chiefly used for cattle, goats, &c., there being in the country more than 1,300,000 cattle, over 550,000 pigs, and over 350,000 goats, while the export of condensed milk reaches about 28,000 tons a year, and that of cheese about 27,000 tons. Nearly 80,000 acres are under vines, and the annual wine production is valued at over £2,000,000. The capital invested in the 1900 hotels of this "playground of Europe" is estimated at over £22,000,000, and over 27,000 persons find employment in connection with them. There are but few minerals. Salt (about 50,000 tons) is worked in Vaud, Basel, and Aargau, limestone for cement in different districts (about 560,000 tons), and asphalt at Val de Travers, and a small quantity of lignite is also mined. The lakes and rivers have fisheries of salmon, trout, gwyniad, and grayling, there being hatcheries for keeping up the stock. Notwithstanding the difficulties of access, the industries are, owing to the abundant water-supply, very important, and about 250,000 of the inhabitants find employment in connection with them. Of these nearly half are engaged in the making of various textiles (chiefly cottons and silks), while other branches of value, besides those

already mentioned, are the making of articles of food, watches and jewellery, &c, wooden articles (carved work, &c), paper, metal ware, leather, and rubber goods, &c.

*Trade, &c*—The total import of goods intended for home consumption is valued at £42,000,000, and the export of goods produced in the country at £33,500,000. Of the former nearly 40 per cent are raw materials, the remainder being about equally divided between natural products (food-stuffs, &c) and manufactured goods; of the latter nearly 90 per cent are manufactures and manufactured food products, and only about 9 per cent raw materials. The chief imports are iron and iron and steel manufactures, raw silk, coal, raw cotton, cotton goods, woollens, chemicals, leather, copper and brass, wool, wood, jewellery, glass, paper, tobacco, hides and skins, flax, straw (for plait), horse hair, hemp goods, jute goods, &c. The chief exports are silks, cottons, and watches, &c (all between £8,000,000 and £4,800,000—nearly half the silks, one-sixth of the cottons, and one-fourth of the watches, &c, to Great Britain), machinery, cheese, chemicals, condensed milk, woollens, chocolate, and leather goods. Of the imports Great Britain sends about 4½ per cent (three-fourths of it manufactured goods, and the rest mainly raw materials), while of the exports it takes about 23 per cent, almost entirely manufactures and manufactured food products. There is thus a great disproportion between what we give and what we get, and though Switzerland has, during the last ten years, materially increased its purchases of manufactured goods, Great Britain has obtained a most insignificant amount of the extra traffic, and does not take the position she ought among the countries from which Switzerland draws her supplies. Commercial travellers with a knowledge of French and German, and paying regular and frequent visits, as well as the issue of catalogues in French and German, and with weights and measures according to the metric system, and prices in francs, would make a great difference, while local Swiss agents with a knowledge of English would also do good. In 1901, 2937 German commercial travellers visited Switzerland with 203 tons of samples, while Great Britain was represented by 36 travellers with 19 cwts of samples, and some of the German travellers went three or four times in the course of the year. There are a British commercial agent and a consul-general at Zurich, consuls at Berne, Geneva, and Lausanne, and a vice-consul at Lucerne. Mails from and to London thrice daily, letters, 2½d per half-oz; postcards, 1d, parcels, *via* France, under 3 lbs, 1s 6d.; between 3 and 7, 2s, between 7 and 11, 2s 6d, *via* Belgium, 3d more, money orders to and from, telegrams, 3d a word.

*Money, &c*—The unit of account is the franc

=10 batzen=100 rappen or centimes; centner =50 kilogrammes, 100 pfund=110 lbs avoird; quintal=220 lbs avoird.; arpent=eight-ninths of an acre The Swiss flag has a red ground, bearing in the centre a white St George's cross with short arms which nowhere reach the edges of the banner.

**Sydney**, the chief town of New South Wales, Australia, on the S side of Port Jackson 4 m. up from the entrance There are natural deep water frontages and wharves which permit vessels of the largest size to lie alongside the quays, these having an extent of some 23 m Port Jackson is at the entrance from the Pacific a little over a mile in width, and the extreme length of the harbour is some 15 m, the shores being deeply indented with many bays and inlets Two of the largest are North Harbour, opening off the entrance immediately behind the North Head, and Middle Harbour a little to the W of it and running inland for a distance of about 12 m. The town has graving docks from 410 to 630 ft. in length, with a depth of water of from 19 to 32 ft. on sills at high water of spring tides, chief station of British navy in the Southern Hemisphere, outlet for great coalfield, manufactures of joinery ware, coaches and waggons, tweeds, machinery, iron ware, &c., imports agricultural implements, iron and iron ware, galvanised sheets, iron bars, machinery, petroleum, paper, textiles of all kinds, tallow, timber, ready-made clothing, hardware, earthenware, saddlery, iron ware of all kinds, and provisions and general goods of all kinds, exports wool, tallow, skins and hides, horns, hoofs, bones, leather, silver, gold, copper and copper ore, tin and tin ore, lead, coal, shale, live stock, &c Letters, 33 days, parcels, 42 Time for noon at Greenwich, 10 5 P M Regular communication from London, Liverpool, Southampton, Manchester, Bristol, and Glasgow Distance from London, 10,840, Liverpool, 10,765; Glasgow, 10,875, Cardiff, 10,670, Melbourne, 570, Wellington, 1234, New Caledonia, 1070, Fiji Islands, 1725, Thursday Island, 1600 Pop 112,000, or including suburbs, 370,500

**Syra**, the largest of the Cyclades, in the Aegean Sea, Greece, with a length of 10 m and a breadth of 5 It is of importance for the chief town, Syra or Hermoupolis, on the E side, which has a large and important trade.

**Tabriz** See Azerbaijan

**Tacoma**, a port of Washington, United States, on the E. side of Puget Sound, 38 m by rail S of Seattle, terminus of Northern Pacific Railway, saw-mills, and manufactures of wooden goods, fish canning, &c.; good harbour, with 30 ft depth at quays at low water, grain elevators and large trade in timber,

imports (valued at over £1,200,000, of which over half comes from Great Britain), coal, manufactured goods and yarn, colonial produce, hides, timber, iron, Yarmouth bloomers and other salted and dried fish, chemicals, &c., exports, emery stone and citrons from Naxos, sponges from the Sporades, tobacco from Nauplia, valonea from many of the surrounding districts, and leather, flour, and fresh vegetables Of 2,500,000 tons entered and cleared half are Greek and one-ninth British Regular communication from London British consul Area, 42 m Pop 35,500

**Syracuse**, a port on the S E coast of Sicily, 80 m S S W of Messina, with manufactures of chemicals and pottery, one of the best harbours in the Mediterranean, taking vessels of any size; imports (total value £120,000, two-thirds from Italy, one-fifteenth from United Kingdom), mainly wheat and flour, timber, and petroleum, exports (total value £200,000, one-third to United Kingdom), lemons and oranges and lemon and orange peel, asphalt, olive-oil, locust beans, almonds, tomatoes, olives, &c. Letters, 3½ days British vice-consul Pop 23,000

**Syracuse**, a city of New York, United States, 149 m. by rail E of Buffalo and about midway between that place and Albany, on the Erie and Oswego canals, large salt works (brine springs), blast-furnaces, iron and steel works, making of boilers, engines, agricultural machinery, iron ware, silver ware, musical instruments, saddlery, and boots and shoes Pop 108,500.

**Szechuen**, the largest province of China, in centre W, fertile, coal and iron (found near one another), salt, copper, and zinc, oil-seeds, silk, sugar, brick-tea, cotton, opium, tobacco, rhubarb, white wax (produced by an insect found in the S W. of the province), annual value of the exports estimated at some £5,000,000, and of the imports from Europe at over £3,000,000 A large amount of this is cotton and woollen fabrics. Area, 160,800 m Pop 67,713,000

**Szegedin**, a town of Hungary, near the junction of the Maros and Theiss, 118 m by rail S E of Buda-Pesth, with a large trade in wood and wooden ware, salt, wool, and grain, growing of a peculiar kind of capsicum (paprika), distilleries, and manufactures of matches, coarse cloth, soda, soap, and tobacco Pop. 103,000.

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imports (total value over £2,000,000), jute, cement, and provisions and general goods, exports (total value £4,500,000), wheat, flour, coal, timber, and tinned salmon Regular communication from London, Liverpool, and Glasgow British vice-consul Pop 38,000

**Taganrog**, a port of Russia, on a large bay on the Sea of Azov, which receives the River

Don, outlet for the rich wheat-producing districts of S Russia; large vessels have to lie from 25 to 30 m off shore, as the water is too shallow to allow them to come nearer, manufacture of tobacco and macaroni, tanning, fishing, imports (total value about £700,000), fruit, machinery, oil, carobs, hides, sewing machines, wine and spirits, resin, and electrical appliances, exports (total value about £5,000,000), wheat (over half), rye, barley, oats, linseed, rape seed, wool, oil-cake, bran, butter, caviare, &c. Of 1,300,000 tons entered and cleared about 30 per cent are British. Regular communication from the Tyne. Distance from London, 3680 m, Tyne, 3960. Glasgow, 3720. British consul. Pop 52,000.

Tahiti, the largest of the Society Islands, irregular in shape, with an area of about 600 m<sup>2</sup>, volcanic, reaching an extreme height of 7340 ft, with coral reefs round, and fertile land along the coast, imports (total value a little over £100,000), cottons and food-stuffs, produces and exports pearl-shell, copra, vanilla, bêche-de-mer, and cocoa-nuts, to a value of somewhat over £100,000, nearly half the trade with the United States, one-sixth with the United Kingdom. Of over 120,000 tons entered and cleared one-sixth is British. Letter postage, 2½d per half-oz, postcards, 1d; parcels, under 3 lbs, 5s 6d, between 3 and 7, 6s, between 7 and 11, 6s 6d. British consul. Pop 11,000.

Talienwan. See Dalny.

Taltal, a port of Atacama, Chile, with good anchorage close to shore in 5 fathoms of water, vessels loaded and discharged by launches, imports coal, and general goods, and exports nitrate of soda, copper and gold ores, and sulphur. Of 1,000,000 tons entered and cleared 50 per cent are British. British vice-consul. Pop 5000.

Tammerfors, a town of S W Finland, manufactures of cotton, linen, paper, woollens, locomotives, &c, power from waterfalls. Pop 27,000.

Tampico, a port of Mexico, on the Panuco 9 m up from the Gulf of Mexico, 270 m by rail E of San Luis Potosi, depth on bar 22 to 24 ft, and at quays 18 to 22, imports coal, lumber, machinery, hardware, provisions, and general goods, exports fustic, ores (copper, lead, gold, silver, antimony, and zinc), sarsaparilla, cedar, hides, cattle, coffee, &c. Regular communication from London and Liverpool. Distance to New Orleans, 770 m, Havana, 850. British vice-consul. Pop 19,000.

Tamworth, a town of Staffordshire, England, on the Tame, 17 m by rail NNE of Birmingham, coal in neighbourhood, and manufactures of elastic web, tape, small wares, paper, market gardens. Pop 7271.

Tanganyika, a lake of Central Africa, lying between 3° and 9° S and with the meridian of

30° E. passing through its centre, with a length of 420 m, and a breadth of from 15 to 80, the depth varies from about 900 to 1300 ft, being greatest in the N. The W. side belongs to the Congo Free State, the E. to German East Africa, and the S. to British Central Africa; important for line of communication between the Nile basin and South Africa, surface, 2670 ft above sea-level.

Tangier, or Tangiers, a port of Morocco, on the Strait of Gibraltar; 35 m. S W of Gibraltar, with deep water anchorage about a mile off shore, imports (total value about £600,000), cottons (10 per cent), silk (raw and manufactured), sugar, tea, woollens, and comestibles and general goods, exports (total value about £400,000), oxen, eggs, clippers, carpets, and woollen goods, goat-skins, wax, &c. Of 900,000 tons entered and cleared £80,000 are British. Mails from London every day; money orders to and from, letters, 1½ days. British consul-general. Pop about 30,000.

Tanjore, a town of Madras, British India, 200 m S S W of Madras City, on the Canavery, manufactures of artistic models in clay, silk, carpets, copper ware, jewellery, &c. Pop 58,000.

Taranaki, a provincial district of New Zealand, on the western side of the North Island, S and S W of Auckland, with a coast-line of about 130 m, and an area of 2,117,350 acres, about three-quarters covered with thick forest, and of the rest a considerable amount is flax country. Very pure iron-sand along coast, but at present nothing is being done with it; graphite and petroleum known to exist, small amount of agriculture, and about 700,000 acres under sown grass, over 500,000 sheep, and over 200,000 cattle. Pop 38,000.

Taranto, a port of S Italy, on a rugged inlet in the Gulf of Taranto, 72 m by rail S S E. of Bari, oyster and mussel fishing, anchorage W of the town in 5 fathoms, vessels up to 18 ft draught can enter the harbour, dry dock for war ships but available for merchant vessels, 650 ft long and with 32 ft of water on the sill, imports general goods, exports olive-oil, wine, and liquorice. Pop about 50,000.

Tarapacá, a province of N Chile, with enormous deposits of nitrate of soda, and, on the coast, of sulphate of soda, salt, and guano, mining of copper, silver, nickel, and gold, alpaca and ordinary wool. See Iquique. Area, 19,306 m. Pop 90,000.

Tarn, a department of S France, forests of oak and beech, wheat, maize, vines, hemp, and apples for cider, coal mining, and small manufacture of woollens and hosiery. Area, 2217 m. Pop 332,000.

Tarn-et-Garonne, a department of S France, wheat, maize, vines, plums, hemp, mulberries, and silk-worms, phosphates, manufactures of iron, paper, &c. Area, 1436 m. Pop 196,000.

Tarragona, a port on the E coast of Spain, at the mouth of the Francoli River, 60 m by rail W of Barcelona, some little spinning and weaving of silk and jute, manufacture of felt, and lace making, harbour has a depth of 5 fathoms, imports wheat, codfish, coal, staves, machinery, petroleum, sulphur, &c; exports wine, oil, nuts, almonds, &c. Great Britain has about one-fifth of the trade of £1,200,000. Regular communication from Glasgow. Distance from London, 1840 m, Glasgow, 1880. British vice-consul. Pop 23,000.

Tashkent, the chief town of Russian Turkestan, Central Asia, 180 m NE of Samarcand, great centre of trade with Russia, Bokhara, Kashgar, Persia, and India. Pop 156,500.

Tasmania.—*Situation and Size, &c*—Tasmania is a state of the Australian Commonwealth, an island off the SE of the main continent of Australia and separated from it by Bass Strait (150 m), lying between 40° 40' and 43° 38' S and between 144½° and 148½° E, with a length from N to S of 170 m, an extreme width of 200, and an area of 24,330 m, or, including islands and lakes, of 26,215. The coast has many excellent harbours and sheltered anchorages. In the E the mountains rise to nearly 4000 ft, with an extreme height of nearly 6500, and in the centre and W there is a tableland reaching 3000 ft and with mountains rising above it to over 5000 ft. There are a number of fresh water lakes on the plateau, and the rivers though short are numerous, the island being well watered. The chief are the Tamar near the centre of the N coast (the estuary of the North and South Esks) navigable for large vessels for 28 m up, and for vessels drawing not more than 20 ft to Launceston 40 m up, the Derwent in the SE reaching the sea at Hobart, and the Corinna and Gordon (Macquarie Harbour) on the W. The mean temperature of the summer months—December, January, February—is 62° Fahr., and of the winter—June, July, August—47°. The rainfall on the lower ground is from 20 to 21 in but among the hills from 40 to 50. There is a Governor appointed by the Crown, a Legislative Council, and a House of Assembly. A main line of railway crosses the island from Launceston to Hobart, the chief town, in the SE (133 m), and thus, the line across the NW corner from Burnie to Strahan, and a number of short branch lines, bring the total mileage to about 600, all belonging to the state. There are also some 6000 m of made roads.

*Productions and Resources, &c*—Tin is extensively worked in the NW and along the E coast, and gold, silver, copper, coal, iron, wolfram, and asbestos are all worked—the last four in comparatively small quantity—while lead, bismuth, antimony, plumbago, kaolin, and coal-ore exist. The total mineral output is valued at more than £1,800,000, of which

copper is over half, and gold, silver, and tin, each about a sixth. The chief timber trees of value are blue gums (shipbuilding, sleepers, piles, wood-paving, &c), pines, wattles (for bark, &c), blackwood, &c. Little over 520,000 acres are under cultivation (three-fifths under permanent artificial grass), but that area will be largely increased when the many suitable districts at present unavailable through difficulties of access are opened up by good roads. There are, besides, nearly 5,000,000 acres of bush land cleared and fit for grazing. Hops thrive, and all the ordinary European fruits grow abundantly, their culture and preserving being of importance, as the export of fruit and jams is valued at nearly £190,000, and shows a steady increase. There are about 1,700,000 sheep, and the export of wool is worth from £300,000 to £400,000. There are tin-silver-and copper-smelting, tanning, brewing, saw-mills, jam works, soap and candle works, flour milling, making of agricultural implements, a small woollen industry, &c. Of the whole population nearly half are dependent on agriculture, over a quarter on industries, and nearly one-sixth on commerce. The total imports—largely haberdashery, hardware, sugar, and machinery—are valued at over £2,000,000, and the exports at over £2,500,000. Of this the copper and copper ore are over one-third, the wool, silver and silver ore, fruit, and tin, each over one-tenth, gold a little less than one-tenth, and timber and bark, and hops are also sent out to a considerable value. Of the imports Victoria and New South Wales send 60 per cent, other British colonies 7, and the Mother country 30, and of the exports Victoria and New South Wales take 39 per cent, other British colonies 4, and the mother country over 26. The imports into Tasmania from the United Kingdom (total £340,000) are chiefly wool, and apples, and the British products sent to Tasmania (total £530,000) are chiefly apparel and haberdashery, cottons, iron (wrought and unwrought), machinery, woollens and worsteds, leather (wrought and unwrought), paper of all sorts, railway carriages and parts thereof, and spirits. The mercantile marine has a tonnage of about 17,000; while the total tonnage entered and cleared is over 1,200,000. Mails from and to London every week; postage, &c, as for New South Wales. Parcels, 41 days. Pop 172,500.

Taunton, a town of Somerset, England, on the Tone, 45 m by rail SW of Bristol, agricultural centre, with some little making of shirts and collars, gloves, and silk. Pop. 21,078.

Taunton, a town of Massachusetts, on the Taunton River, 34 m by rail S of Boston, works for the making of copper, sheet zinc, and yellow sheet metal, locomotive works, and making of cotton-weaving machinery, nails, stoves, and general iron ware; cottons. Pop 31,000.

**Taurida**, a government of S Russia, between the Sea of Azov and the Black Sea, surface mostly low steppes, salt making, fishing, cattle-rearing, and, in the Crimea, vines and wine. Area, 24,497 m Pop 1,444,000

**Tay**, a river of Scotland, draining almost the whole of Perthshire, and a considerable portion of Forfar, Argyll, and Inverness; with a total length of 120 m, and a basin of 2400 m, navigable to Newburgh for vessels drawing up to 11 ft., and at spring tides as far as Perth for vessels drawing 9 ft. The Firth of Tay, extending 25 m from the sea, has a breadth of from two-thirds of a mile to 3½ m. Great salmon fisheries

**Teheran**, the chief town of Persia, on a great plain, about 70 m S of the Caspian, important telegraph centre, some little manufacture of carpets. Letters, 22 days British consul-general Pop 250,000

**Tehuantepec.** See Mexico

**Tennessee**, one of the central southern states of the United States lying between the Mississippi and the Appalachians, minerals all over E, where enormous coalfields occupy some quarter of the total area, large deposits of iron ore, working of copper, zinc, and marble. The western part of the state produces crops of maize, &c, tobacco, and pea-nuts, cotton in the SW and in the S centre, rearing of pigs and other live stock, forests of pine, hemlock, chestnut, and walnut, manufacture of iron, machinery, and agricultural implements, tobacco manufacture, weaving of cottons and woollens, flour and paper mills, and potteries. The *Tennessee River* has a total course of 1200 m, of which 300, from the Ohio upward, are navigable. Thence railway as far as Knoxville, where navigation becomes again possible for other 500 m, area of basin over 41,000 m. Area of state, 41,750 m Pop 2,021,000

**Terneuzen.** See Ghent

**Terre Haute**, a town of Indiana, United States, on the Wabash, 178 m by rail S of Chicago; rolling mills, nail works, foundries, hominy ginding mills, &c. Pop 37,000

**Texas**, a large state of the United States, in the extreme SW, on the Gulf of Mexico, with a coast-line of about 390 m, state traversed by the Southern Pacific Railway, and by other systems connecting this with the Mississippi valley, and continuing the Mexican system northward to Topeka and St Louis. In the E there is a considerable amount of true coal, but the cost of working it is high, and there are also beds of brown lignite, and deposits of iron ore, tin, gold, silver, copper, lead, petroleum, salt, and gypsum, forests of pine and oak, in the E heavy crops of cotton (in which product Texas is now the leading state), sugar, and rice. Farther inland wheat and other kinds of grain are cultivated, and there, as well as in the W, there is a great amount of grazing and stock-rearing, Texas leading in wool just as it does in cotton,

while cattle-rearing is almost equally important, horses, mules, and pigs kept in large numbers, and dairy produce rapidly becoming more and more valuable; large quantities of beef for export are sent to Galveston and New Orleans, and there is also a considerable amount of leather making, and export of hides. Area, 262,290 m Pop 3,049,000

**Thames**, a river of South England, with a course of about 240 m, and a basin, including that of the Medway, of over 6000 m. From the N. the chief tributaries are the Cherwell, Thame, Colne, and Lea, and from the S the Kennet, Mole, and Medway, but of these only the Medway is of importance. At Gravesend the breadth is about 800 yards, and from this to the Nore, which is generally taken as the mouth of the river, the distance from bank to bank gradually widens to 6 m. Below the Nore there is a rapid extension to nearly 20 m. The largest sea-going vessels can reach Tilbury Docks 26 m below London, those of middle size (say 4000 tons) the Blackwall Docks 6 m below London, and those of 800 tons or less St Katharine's Docks farther up still, while barges can go as far as Lechdale 25 m above Oxford, from which there is communication with the Severn by the Thames and Severn Canal (30 m). Other canals, at different points, gave communication with Bristol, the Midland counties, and the S coast.

**Tharsis**, a town of SW Spain, 45 m by rail N by E of Huelva, on Rio Tinto, with rich sulphur-copper mines. Pop 16,000

**Theodosia**, a port of Russia, on the S.E. coast of the Crimea, with an excellent harbour never obstructed by ice, and having a depth of 35 to 60 ft; connected with central Russia by the Sebastopol Railway line, imports general goods, exports (to a total value of over £1,000,000) wheat, oats, barley, rye, linseed, &c. Of nearly 300,000 tons entered and cleared half are British. British vice-consul Pop 27,500

**Thurgau**, a border canton of NE Switzerland, spinning and weaving of cotton and linen, and embroidery. Area, 381 m Pop 113,500

**Thursday Island**, an island of Queensland, in Torres Strait, about 400 m N.N.W. of Cooktown, and with an important harbour known as Port Kennedy, where vessels drawing up to 22½ ft. can moor alongside the hulks, telegraph station, and an important calling point for steamers, large supplies of coal and provisions can be obtained, centre of trepang and pearl fisheries. Pop 1450, of whom 650 are Europeans, and 400 Japanese. Headquarters besides of 2000 pearl-shell divers.

**Thurso**, a port of Caithness, in the extreme N of Scotland, on a bay of the same name, at the mouth of the River Thurso, 18½ m (21 by rail) N.W. by W. of Wick, good roadstead; small harbour, 13 to 14 ft. at high water of spring

tides, export of Caithness pavement. Pop 3723

Tibet, an extensive region of central Asia, tributary to the Chinese Empire, lying between  $79^{\circ}$  and  $103^{\circ}$  E, and extending from the Himalayas to an extreme limit of about  $39^{\circ}$  N. It is an immense tableland of from 14,000 to 16,000 ft in height, with many ridges rising above the general surface to heights of over 20,000 ft. There is very little agriculture, but the pasture supplies food for the flocks and herds (yaks, sheep, goats, horses, &c) of wandering tribes. There are valuable minerals—gold, silver, iron, copper, lead, cobalt, borax, nitre, rock-salt, sulphur, turquoises, and lapis-lazuli—and an active transit trade is carried on, but entirely by Tibetans and Chinese, it being almost impossible for Europeans to travel in many parts of the country, or to reach the chief town, the sacred city of Lhasa. Manufactures of woollens and many kinds of coarse cloth. Trade with India is carried on by the passes through Sikkim, and others leading to the N W Provinces, the goods sent to Tibet being generally English and Indian piece goods, sugar, tobacco, paper, rice, indigo, spices and gums, silk, iron, and stick-lac. Area, 651,500 m. Pop estimated at 6,000,000.

Tiflis, a government of Trans-Caucasia, Russia, extending northward to the highest part of the Caucasus, hilly surface both N. and S (centre is part of the basin of the river Kur), but with a good deal of waterless steppes; irrigation provided from the Kur and its tributaries, gold, silver, iron, copper, naphtha, rock-salt. The chief town, of the same name, on the Kur River, 160 m. in a direct line from the Black Sea, and with railway communication with Batoum and Baku, is a great centre of trade between Russia and Persia, and is famous for its silver work, and for the manufacture of fire arms. Letters, 10 days. Area of province, 16,847. Pop. 1,041,000; pop of town, 161,000.

Tilburg, a town of North Brabant, Holland, 14 m S W of Bois-le-Duc, with manufactures of cottons, woollens, leather, &c. Pop 41,500.

Tilbury Docks, Essex, England, opposite Gravesend, 25 m E of London, four docks with an area of 54 acres can be left and entered at all states of the tide.

Tilsit, a town of E Prussia, on the Memel, 65 m by rail N E of Königsberg, with a trade in timber, grain, hemp, flax, coal, oil, cattle, butter, &c, flour mills, and manufactures of iron ware, machinery, glass, &c. Pop 35,000.

Timbuctoo, a city of the French Soudan, in the S of the Sahara, about 9 m N of upper Niger, important trade centre exchanging gold dust, salt, kola-nuts, gums, ivory, ostrich feathers, dates, &c, for cottons, tea, and general African trade goods, trade with Niger, caravans from Algeria and Morocco. Pop 20,000.

Time.—Greenwich, or London, time is the official time in Great Britain, Belgium, Holland, and Spain. Ireland uses Dublin time, which is 25 minutes behind Greenwich. In Austria-Hungary, Denmark, Germany, Italy, Norway, and Switzerland, the fixed hour is 1 p.m. for noon at Greenwich. Cape Colony, Egypt, Natal, Orange River Colony, Transvaal, Turkey, and Rhodesia have the standard meridian of  $30^{\circ}$  E, or 2 p.m. for noon at Greenwich. In Canada and the United States there are five zones—maritime, New York, central, mountain, and Pacific—the first extending to  $67\frac{1}{2}^{\circ}$  W, the second to  $82\frac{1}{2}^{\circ}$ , the third to  $97\frac{1}{2}^{\circ}$ , the fourth to  $112\frac{1}{2}^{\circ}$ , and the fifth to the W of that, with times 4, 5, 6, 7, and 8 hours respectively behind Greenwich. Japan time is 9 hours before Greenwich; Western Australia has the standard of  $120^{\circ}$  E, or 8 hours before Greenwich; South Australia, the standard of  $142\frac{1}{2}^{\circ}$ , or  $9\frac{1}{2}$  hours before Greenwich; Victoria, New South Wales, Queensland, and Tasmania, the standard of  $150^{\circ}$ , or 10 hours before Greenwich, and New Zealand, the standard of  $165^{\circ}$ , or 11 hours before Greenwich. France objects to Greenwich (because it is not Paris), but shows a desire to have a standard time 9 minutes 21 seconds before Paris time, this representing really the difference in longitude, or in other words, being Greenwich time under another name.

Tipperary, an inland county of Munster, Ireland, fertile, with dairy-farming, dairy produce, and making of condensed milk, coal mining (anthracite), to a small extent. The town does not call for notice. Area of county, 1,050,137 acres. Pop exclusive of Waterford, 160,232, pop of town, 6281.

Triumen, an important trading centre of western Siberia, 70 m S E of Tobolsk, with manufactures of leather, carpets, pottery, &c, which are exported to all districts to the E, as far as China, a large tea trade. Pop 30,000.

Tiverton, a town of Devonshire, England, 14 m N N E of Exeter, with lace manufacture. Pop 10,382.

Tocantins. See Pará.

Todmorden, a town of Lancashire, England, on the Calder, 18 m. N N E of Manchester, with water communication by the Rochdale Canal, and with coal in neighbourhood, and cotton mills, foundries, manufactures of machinery, &c. Pop 25,419.

Togoland, a German protectorate of W. Africa, to the E of the British Gold Coast Colony, with a coast-line of about 32 m, but widening inland, surface undulating from the coast to an extreme height of about 2600 ft; dye-woods, caoutchouc, cocoa, and oil palms, coffee, cotton, and gums are being tried, but the only trade as yet is in palm-oil, palm kernels, rubber, gum, and ivory, which are sent out to a total value of about £150,000 a year. The leading imports are textiles, wood, iron, tobacco,

and provisions. Mails from London every ten days or so, return once a month, parcels as for Cameroons, telegrams, 5s 11d to 6s 6d a word. Area, 33,000 m. Pop 2,500,000, but there are only about 140 Europeans, nearly all Germans.

**Tokyo**, the chief town of Japan, on the S E coast of Honshu, with dockyards, making of machinery, and some manufactures of silk, lacquered goods, earthenware, china, and enamels. British consul-general. Pop 1,440,500.

**Toledo**, a town of Spain, capital of the province of the same name, on the Tagus, 41 m by rail S S W of Madrid, important agricultural centre, with apricots and other fruits, which have widespread fame for their good quality, making of small-arms, and embroidered ecclesiastical vestures and ornaments. The manufacture of sword blades, for which the place was long famous, is still carried on in the neighbourhood. Area of province, 5586 m. Pop 370,100, pop of town, 22,000.

**Toledo**, a town of Ohio, on the Maumee River, 8 m up from Lake Erie with which there is communication by the Erie Canal, railway centre with very large trade in grain, flour, lumber, live stock, hides, wool, cotton, and iron; natural gas in neighbourhood, manufactures of boilers and other iron and steel goods, iron ware, waggons, locomotives, agricultural implements, and furniture, &c. Pop 132,000.

**Tomsk**, a government of Russia, on the Chinese border, connected by canal with the Yenisei and the Irtysh, cattle-breeding, and agriculture. The town of Tomsk, 2800 m E of St. Petersburg, is on the trade route between Triumen and Irkutsk, and also near the Siberian Railway, so that it is a centre of extensive trade, tanning and carriage-making. Letters, 9 days. Area of province, 331,150 m. Pop 1,929,500; pop of town, 52,500.

**Tonkin, or Tonquin**. See French Indo-China.

**Topeka**, a town of Kansas, United States, on the Kansas River, 67 m by rail W. of Kansas City, coal in neighbourhood, large manufacture of flour, railway workshops, meat-packing, iron-founding, making of biscuits, starch, and carriages, &c. Pop 34,000.

**Toronto**, the chief town of Ontario, Canada, on the shore of Lake Ontario, 39 m N E from the W end of the lake, and 338 m by rail S W of Montreal, important railway, lake shipping, and trading, centre, dealing in lumber, cattle, grain and agricultural produce, coal, and fruit, total export valued at about £30,000,000. Regular communication from London. Pop 208,000.

**Torres Strait**, a passage between the N of Australia and New Guinea, with a width of about 80 m at the narrowest part, navigation dangerous on account of the many islands, coral shoals, and reefs, the depth in the narrowest part being only 12 to 14 fathoms.

**Toulon**, a port and arsenal in the depart-

ment of Var, France, on a bay of the Mediterranean, 42 m E S E. of Marseille, anchorage off shore with a depth of from 6 to 7 fathoms, and excellent harbour, with a depth of 16 ft. at quays, large trade with Africa; imports coal, grain, wood, hemp, salt beef, provisions, and general goods; exports wine, oil, salt, figs, raisins, capers, oranges, almonds, &c. British vice-consul. Pop 102,000.

**Toulouse**, a town of the department of Haute-Garonne, France, on the Garonne 150 m by rail S E of Bordeaux, and on the Canal du Midi, centre of a large and important trade between central France and Spain, with manufactures of leather, tobacco, woollens, silk, carriages, paper, stained glass, iron and copper founding, wire-drawing, cannon-making, distilling of brandy, &c.; famous for geese and duck liver and truffle pie. British vice consul. Pop. 150,000.

**Tourcoing**, a town of the department of Nord, France, 10 m. by rail N E of Lille, with manufactures of woollens (serges, camelots, &c.), cottons, linens, and silk, and making of machinery and beet-sugar. Pop 79,500.

**Tournai**, a town of Hainault, Belgium, on the Scheldt, 35 m W. S W of Brussels, with spinning of cotton and wool, and manufacture of tapestry and Brussels carpets, &c. Pop 31,000.

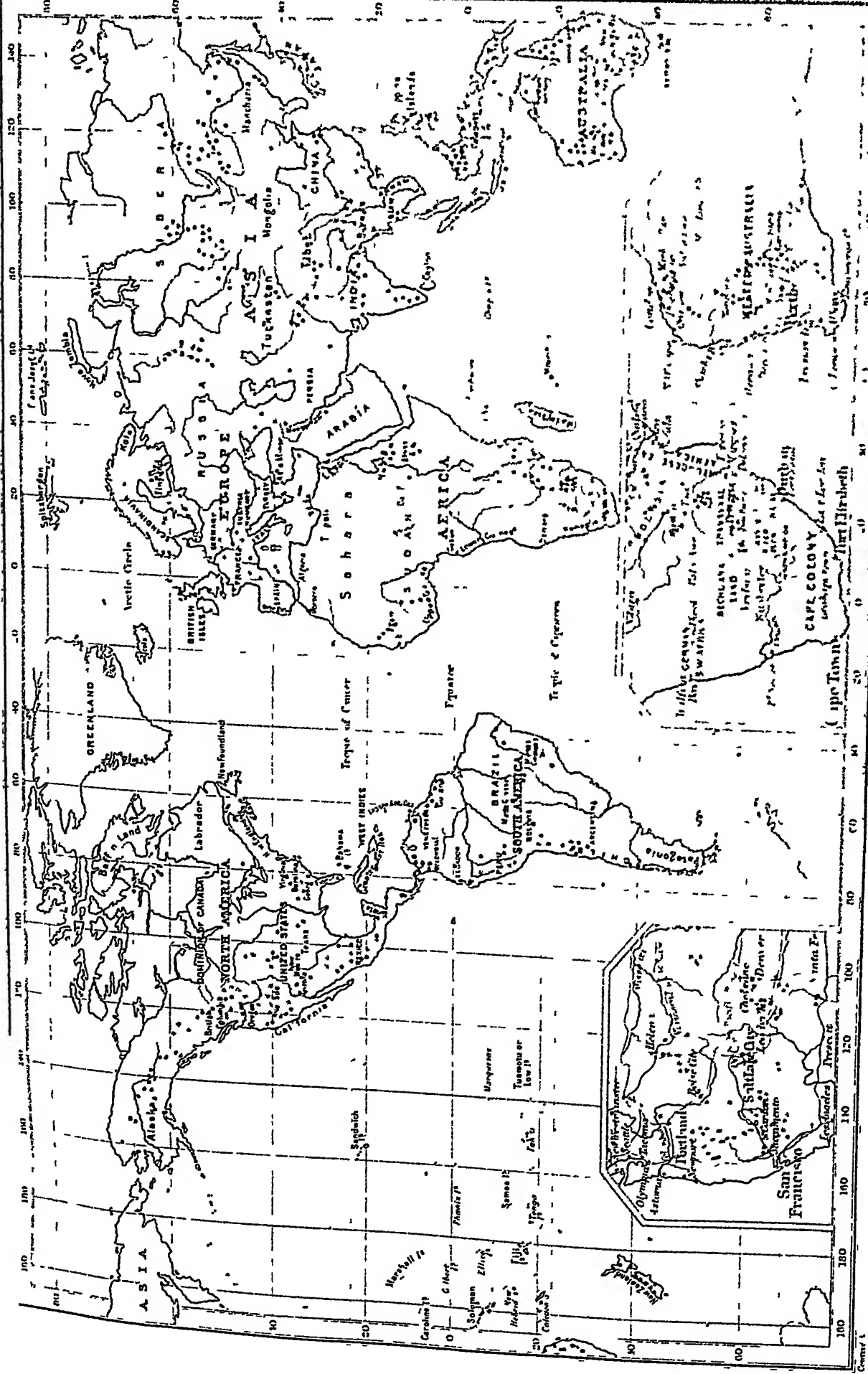
**Tours**, a town of the department of Indre-et-Loire, on the Loire, 147 m by rail S W. of Paris, with manufactures of wool and silk, earthenware, and stained glass. Pop 65,000.

**Townsville**, a port of N. Queensland, on Cleveland Bay, about 870 m N W. of Brisbane, approach channels with a depth of 27½ ft at high water of spring tides, and of 23½ at high water of neaps, 26 ft at quays; the outlet for a very large territory to the W and N W, with gold-fields and good pasture, so that there is a very large export and import trade, the former alone being valued at over £3,000,000, large quantities of frozen meat sent away; railway communication with Charters Towers. Regular communication from London, Liverpool, and Tees. Pop 13,000.

**Trans-Caspian Railway**, a railway in Russia, from Krasnovodsk, opposite Balu, on the E side of the Caspian Sea, eastward by Merv and Samarcand to Andijan.

**Transvaal**, a colony of British South Africa, lying between 22° and 28° 40' S, and between 24° 40' and 32° 10' E; and bounded N. by Rhodesia (from which it is separated by the Limpopo River), E by Portuguese East Africa and Amatongaland, S by Natal and the Orange River Colony (separated from the latter by the Vaal River), W. by Cape Colony, and N W. by Bechuanaland. The length from N. to S. is about 400 m, the extreme width 700, and the area 113,642, exclusive of Swaziland, on the eastern border, which has an area of some 8000 m. The surface is undulating plateau,

# MINERAL PRODUCTS.





1500 to 4000 in N, and 4000 to 7000 ft in S and E. Above this rise to a much greater height bare isolated hills—kopjes—and mountain ranges, of which the best known are the Magaliesberg westward from Pretoria, the Witwatersrand about Johannesburg and westward to near Mafeking, and the Zoutpansberg, Murchison, Drakensberg, Lydenburg, and Kaap Mountains in the N E and E. The drainage of the N, N W, and N E is carried off by tributaries of the Limpopo, of the S E by the upper waters of the Komati and Usutu, and of the S W by tributaries of the Vaal. The climate of the N and E is tropical and somewhat unhealthy, especially in the Bush Veldt, and there is a great temperature range between summer and winter and between day and night. The summer season is the wet one, and the rainfall is from 26 to 29 in. There are trunk railway connections with the adjoining colonies and with Portuguese East Africa, and a number of branch lines, the total railway mileage being about 900. The whole country is particularly rich in minerals. Gold and iron are found almost everywhere, and though the best known of the goldfields is that stretching for 60 m along the Witwatersrand or "Rand," there are other important areas all over the S E between the Zoutspanberg and De Kaap (Selati, Leydenburg, Barberton), in the W (Malmalm), and S W (Klerkadorp). The total gold output is valued at over £16,000,000 (more than 90 per cent from the Rand). Iron and coal are found in the centre, S, and E, silver and copper all along the centre, and the latter in the N E, lead, plumbago, and quicksilver in the centre W, quicksilver and tin S of Barberton, and there are deposits of cobalt, bismuth, platinum, &c., of less value, as well as diamonds (in the S W along the Vaal and elsewhere). The output of coal is about 5,000,000 tons. Large portions of the N E, E, and centre are suitable for both cattle and grain, tobacco is grown N W of Pretoria, and other districts afford excellent grazing for sheep and goats. There are some industries connected with tobacco manufacture, the making of dynamite, &c., but most of the white population are dependent on the mining, or on agricultural pursuits. The imports (present value about £13,000,000) consist chiefly of apparel and haberdashery, metal manufactures and machinery, leather and leather manufactures, and the provisions and general goods naturally required by such a community. The chief exports are the minerals already noted; but wool, hides, ostrich feathers, and ivory have some value. Mails from and to London every week, letters, 1d per half-oz., postcards, 1d, parcels, not over 1 lb, 1s; and 1s for each additional lb, or fraction thereof, up to 11 lb. Money orders to and from, telegrams, 3 s a word; letters, 20 days. Pop probably

about 1,100,000, of whom 300,000 are whites; Swaziland 60,000, of whom 1000 are whites.

**Trapani**, a port on the W coast of Sicily, 40 m W. of Palermo (141 m by rail), harbour with 30 ft, 24 ft at quays, imports (total value £250,000), wheat, coal, staves, deals and planks, mineral oil, cattle and mules, &c; exports salt fish, salt, wine (Marsala), stone, beans, cheese, and esparto rope, making of articles from alabaster, mother-of-pearl, and coral. British vice-consul. Pop 35,000.

**Travancore**, a native state in Madras, S W. India, flat ground near the coast with coconut and areca-nut palms, rising to the E into the Cardamom Hills, which have an extreme height of 8850 ft; timber, tobacco, cardamoms, tea, coffee, areca nut, nut oil, pepper, copra, coir, &c. Area, 6730 m. Pop 2,560,000.

**Traz-os-Montes**, a province in the N W corner of Portugal, iron, lead, copper, tin, and other minerals, but these are so far hardly worked, cattle-rearing, and in one district excellent grapes from which some of the best port wine is made. Area, 4293 m. Pop 429,500.

**Trebizond**, a port of Turkey, on the Black Sea, in the N E of Asia Minor, 120 m N. E of Erzeroum, good anchorage in 4 to 6 fathoms, imports (total value over £1,700,000), cottons and woollens, sugar, tea, tobacco, crockery and glass ware, maize, &c, silk and velvet stuffs, hardware and cutlery and nails, leather and shoes, petroleum, hides and skins, haberdashery, timber, preserves, rice, &c, exports (total value £700,000), hazel-nuts, carpets, cattle, tobacco, silk stuffs and shawls, &c, hides and skins, sultana raisins, beans, maize, &c. Great Britain sends about 37 per cent of the imports, and receives about 4½ of the exports. British consul. Pop 35,000.

**Tredegar**, a town of Monmouthshire, England, 7 m E by N of Merthyr-Tydvil, large deposits of coal and iron-stone in neighbourhood, and great iron and steel works. Pop 18,574.

**Trent**, a large river flowing through one of the great plains of England, S E, E, and N E, to the estuary of the Humber, with a course of about 170 m., and a basin of over 4000, navigable for 25 m to Gainsborough for vessels of 6 ft draught, and as far as Burton (117 m) for barges; important canal communication with the Mersey, and other canals lead to many midland manufacturing centres.

**Trenton**, a town of New Jersey, United States, on the Delaware River at the head of steamboat navigation, 34 m N E of Philadelphia, water communication with New York, Philadelphia, and Baltimore, by the Delaware and Raritan Canal; great manufactures of earthenware and pottery, of which it is said to turn out more than any other place in the United States, rolling mills and wire manufacture, tool making, chain making, woollen mills, iron and steel works, zinc manu-



**Trondhjem**, a port of Norway, on a fiord of the same name, 250 m by rail N. of Christiania, and 85 m E by N. of Christiansund, good harbour which takes vessels up to 14 ft at the quays; imports coal, salt, grain, machinery, provisions, and general goods; exports timber, iron and copper pyrites, copper ore, chrome, dried fish, and wood-pulp. The narrow land is 80 m long. Regular communication from Hull, distance, 750 m; parcels, 5 days. British vice-consul. Pop of town, 38,500.

**Troppan**, the chief town of Silesia, Austria-Hungary, 181 m NE of Vienna; woollens and linens, beet-sugar, &c. Pop 27,000.

**Trowbridge**, a town of Wiltshire, England, 12 m by rail SE by E of Bath, and with water communication by Kennet and Avon Canal; manufactures of kerseymere, tweeds, fine broadcloths, and other woollens. Pop 11,525.

**Troy**, a town of New York, United States, on the Hudson River, at the head of steamboat navigation, 4 m. up from Albany, railway centre with regular communication with New York both by rail and river, steel works, blast-furnaces, and rolling mills; shirt and collar making; manufactures of cotton and hosiery, machinery, carriages, axles and wheels, stoves and other iron ware, mathematical instruments, flour, earthenware, &c. Pop 61,000.

**Truro**, a town of Cornwall, England, on the tidal Truro River, 60 m W. of Plymouth, with tin and copper mines in neighbourhood; harbour, dry at low water, has a depth of 9½ ft. at high water of spring tides, exports tin and copper ore. Pop 11,562.

**Tucuman**, a north-western province of the Argentine, sugar-cane, maize, and rearing of horses, cattle, and mules, in all of which the chief town, Tucuman, has a considerable trade, rice, tobacco, vines, and oranges are also grown. Area of province, 8926 m. Pop 249,500, pop of town, 50,000.

**Tula**, a government of central Russia; coal and iron, beet-root; sugar works and flour mills, and iron ware. The chief town of the same name, on the Upa one of the tributaries of the Oka, 120 m by rail S of Moscow, has works for the manufacture of iron and steel goods (including an imperial factory for fire-arms), cutlery, locks, bells, tea-urns, &c.; many of the articles ornamented by mello-work, dye-works. Area of province, 11,954 m. Pop 1,433,000, pop of town, 111,100.

**Tunis**, a French protectorate of N Africa, immediately to the W of Algeria, with a coast-line along the Mediterranean on the N and E of over 500 m, coast broken, with some excellent harbours, of which the chief, Bizertia, has become an important French port, coast-land low, but rest of surface hilly, with tracks of rainless desert, during the rainy season, from October to March, the rest of the country has a rainfall of from 10 to 50 in.,

as for France, parcels, under 3 lbs, 2s 3d; between 3 and 7, 2s 4d; between 7 and 11, 3s; money orders to and from; telegrams, 2d a word. British consul general at Tunis. Area about 51,000 m. Pop estimated at about 1,800,000, of whom some 53,000 are Italians, and 24,000 French. The chief city, of the same name, is connected with the sea by a canal with a depth of 21 ft; imports and exports those of the colony. Pop about 180,000, of whom 13,000 are French.

**Tunstall**, a town of Staffordshire, England, 4 m NNE of Newcastle-under-Lyme, with coal in neighbourhood, blast-furnaces, earthenware, oil, and chemicals. Pop 10,492.

**Turin**, a town of N Italy, at the junction of the Dora Riparia with the Po, 54 m by rail from the Italian end of the Mont Cenis tunnel, and 80 m NW of Genoa, manufactures of silk and cotton velvet, silk ribbons, cottons and woollens, lace, carpets, paper, gloves, hosiery, steel and iron ware, earthenware and glass, tobacco, and wax matches. Letters, 1 day 6 hours, parcels, 2 days 3 hours. British vice-consul. Pop 336,000.

**Turkey, or The Ottoman Empire.**—*Situation and Size*—Turkey is an empire partly in Europe, partly in Asia, and partly in Africa. Asia Minor, Tripoli, &c are separately noticed, and reference here is mainly to European Turkey. This lies between 39° and 43° N, and between 19° 15' and 29° 20' E, and is bounded N. by Bosnia, Servia, and Bulgaria, E by the Black Sea and the Bosphorus, S by the Sea of Marmora, the Dardanelles, the Aegean Sea, and Greece, W by the Adriatic and the Ionian Sea, and N W by Montenegro. The extreme length from E to W is about 510 m, the width varies from about 50 to about 265 m, and the area is about 65,000 m. There is low ground in the E along the Aegean, and along the Adriatic, but elsewhere the surface is uniformly mountainous, the highest points varying from 7000 to 9800 ft. The drainage is carried off by a large number of streams flowing to all the surrounding seas, but of these the only one of any commercial value is the Maritza in the S E, which is of importance for irrigation and is navigable for small boats as far as Adrianople. The climate in the higher and more exposed districts is one of extremes, the winter cold and the summer heat being alike intense, but in the sheltered parts in the E and S it is delightful, with a winter range of from 32° to 48° Fahr, and a summer range of 72° to 82°. The rainfall varies from 40 inches among the mountains of the W, to 25 inches in the E, and 28 in the S. The government is by a hereditary absolute sultan or padishah, who is also the head of the Mohammedan world. The total railway mileage of the empire is about 3000, of which about 1300 m are in the European part, and the properly made roads (about 1000 m) are utterly inadequate for the needs of the country. There is a coast-line on the E and S of some 1800 m, and on the W of about 350, but there are few ports. The area of the whole empire, exclusive of Egypt, is estimated at nearly 1,200,000 m, and the population at 30,500,000. The pop of European Turkey is estimated at over 6,000,000.

*Productions and Resources, &c.*—The soil is fertile, and could the Turk only be roused to improve his wretched implements and his primitive methods the present output of wheat, maize, rice, rye, oats, barley, sesame, all the ordinary fruits (apple, pear, apricot, peach, chestnut, walnut, fig, almond, orange, lemon, &c), olives, vines, oil-seed plants, mullet, opium, mulberry, roses, tobacco, madder, and cotton, might be largely increased. Much of the higher ground is covered with forest (oak, fir, pine, beech, chestnut, walnut, &c), and there is a large amount of pasture with sheep and goats. The mineral wealth, which is considerable, is but little developed. Chrome, silver-lead, zinc, manganese, antimony, copper, borax, meerschau, and coal and lignite are worked on a

small scale, and emery, asphalt, iron, quicksilver, arsenic, and sulphur are known to exist. There are important coast fisheries, and a sponge fishing on the Mediterranean. There are hand-loom manufactures of carpets, light dress materials, coarse cloth, leather, saddlery, and leather goods, laces and trimmings, filigree work, and brass and copper work, manufacture of tobacco, and spinning of silk, cotton, and wool. The trade of European Turkey cannot be estimated, but for the whole empire the imports seem to have a value of about £21,000,000, and the exports of over £13,000,000. Of the former Great Britain sends 42 per cent, Austria-Hungary less than half of that, France less than one-quarter, and Russia about one-sixth. Of the exports Great Britain takes 40 per cent, France over 29, and Austria-Hungary over 9. The chief imports are cotton and cotton yarn, carpets and other woollens, sugar, coffee, rice, petroleum, madapollams, flour, iron, hardware, hides, and coal; and the chief exports grapes, silk, mohair, bones, valonea, wheat, opium, hides and skins, wool, figs, coffee, olive-oil, ores, carpets, tobacco, wines, salt, and nuts. The imports into the Turkish empire from Great Britain are valued at over £7,000,000, and the exports from the Turkish empire to Great Britain at over £5,800,000. The imports sent to European Turkey (total over £2,500,000) are chiefly cottons (more than half), woollens and worsteds, coal, cotton yarn, machinery, iron, copper, tin, and jute goods, and there is a transit trade of foreign and colonial merchandise—cottons, jute goods, iron, tallow, &c.—of about £180,000. The exports received (total £1,350,000) are chiefly mohair, maize, opium, woollens, linseed and other seeds, wool, wheat, oats, barley, manganese and other ores, olive-oil, and tobacco. To Asiatic Turkey the United Kingdom sends (total £4,200,000) cottons (three-fourths), cotton yarn, woollens and worsteds, coal, copper, iron, machinery, and tin, and there is a transit trade—one-half cottons—of some £150,000. From Asiatic Turkey it receives (total over £4,300,000) barley (nearly one-quarter), raisins, valonea, wool, figs, maize, beans, opium, sponges, dried fruits, olive-oil, gums, galls, oil-seeds, oats, oranges, wheat, copper, iron ore, and tobacco. The mercantile marine has a tonnage of some 200,000, and the total tonnage entered and cleared, at all ports, is about 34,000,000. Here, as elsewhere, British trade would gain by central agencies, British-born and specially trained commercial travellers, and cheaper goods even at slight sacrifice of quality. There are British consuls-general at Baghdad, Beyrout, and Salonica, and consuls and vice-consuls at all the leading places. Mails from and to London depend on the district, letters, 2½d per half-oz, postcards, 1d, parcels, under 3 lbs, 2s. to 3s according to route and place, between 3 and 7,

2s 6d. to 3s 6d , between 7 and 11, 3s to 4s , telegrams, via Odessa, 11d a word ; other routes, 6d

*Money, &c.*—The units of account are the lira, or Turkish £=184 = 100 piastres, and a "purse" is taken at 5£T, or about £1, 10s. The metric system has been declared obligatory, but the decree is not enforced. The old weights and measures are also: 283 lb avoird (39.41 okes=1 cwt) ; cantar or lintar=44 okes, tchek=180 okes, kileh=20 okes ; 100 kilehs=12 125 qrs ; almud=1 151 gillons, andazé=27 m, arshin=30 in ; djerid=2.47 acres=100 evlek. The Turkish naval ensign is red, with a crescent and star of white at the side next the staff to which the convex side of the crescent is turned. The flag for merchant vessels is green with a red circle in the centre bearing a white crescent. The imperial standard has a red ground bearing the sultan's monogram.

**Tuskar**, a rock 7 m E by N of Carnmore Point, Wexford, Ireland, with a lighthouse 113 ft. high, light visible 19 m.

**Tuticorin**, a port in the S.E. corner of Madras, India, on the Gulf of Manar, with fishing for pearls and conch shells, harbour has a depth of 11 ft at high water of spring tides, exports of cotton, coffee, and sugar. Regular communication from Liverpool. Distance from Colombo, 150 m. Pop 28,000.

**Tver**, a government of central Russia, on the upper Volga, plateau to the S of the Valdai Hills, with a height of from 800 to 1000 ft, river and canal connection with Lake Ladoga ;

## U

**Udine**, a town of Venetia, Italy, 85 m. by rail N.E. of Venice, silks, cottons, leather, oil, gloves, and wax matches. Pop 38,000.

**Ufa**, a province of S.E. Russia, forests, extensive iron mining, iron works, flour mills, and tanneries. The chief town, Ufa, is on the Siberian Railway, 326 m by rail E.N.E. of Samara. Area of province, 47,112 m. Pop 2,220,500, pop of town, 50,000.

**Uganda.** See British East Africa.

**Uleåborg**, a port of Finland, Russia, chief town of a province of the same name, on the Uleå, near the head of the Gulf of Bothnia, harbour has a depth of 16 ft, railway communication to Helsingfors, which is 500 m distant, imports coal, iron ware, hides, flour, coffee, tobacco, tanning materials, &c ; exports deals, boards, logs, tar, wood-pulp, fish, butter, leather, reindeer meat, &c. Regular communication from Hull. Distance from London, 1550 m, Hull, 1460, Leith, 1455, Abo, 370. British vice consul. Pop 17,000.

**Ulm**, a town of Wurtemberg, Germany, on the Danube which is navigable from this point, 95 m by rail N.N.W. of Munich, trade in

timber and grain ; manufacture of cottons and woollens, linens, pipe bowls, sewing machines and other machinery, brass ware, paper, leather, &c. Pop 43,000.

**United States**—*Situation and Size, &c.*—The United States is a great republic occupying a large portion of the southern half of North America, extending across the whole continent from E to W., and bounded N by Canada, E by the Atlantic, S by the Gulf of Mexico and Mexico (Rio Grande del Norte, &c), and W by the Pacific. The detached territory of Alaska in the N.W. is separately noticed. The main portion of the country as described above lies between 25° (a few small islands farther S) and 49° N, and between 67° and 124° 30' W, has an extreme length from N to S of some 1660 m, a mean breadth of nearly 2700, an area (exclusive of Alaska) of 3,000,000, and a coast-line of over 13,000. The main outlines of the surface features are simple. Inland from the E coast is the Atlantic Plain with an average width of some 200 m. and rising to the ridges of the Appalachians. To the W of these the ground sinks to the great

Central Plain, with its Prairies rising westward into the Great Plains—a low plateau E. of the Rocky Mountains. Still farther W. come the Rocky Mountains themselves, succeeded by mountainous plateau, then by the Cascade Range and the Sierra Nevada (extreme height 14,000 ft.), and by the Coast Range and the Sierra Madre, from which there is a rapid drop to the Pacific. Taking 98° W. as a dividing line, by far the larger proportion of the country to the W. of it is over 2000 ft. above sea-level, while to the E. an equally large proportion is under that height, more than half of it indeed under 600 ft. The features of the Central Plain is practically broken only by the Ozark Mountains (extreme height some 2000 ft.) which curve through southern Missouri, Arkansas, and the Indian Territory. S. E. of Oklahoma, and across its northern part is a rising ground known along the southern side as the Great Divide and on the northern side as the Height of Land. This has no great elevation, and so the cold winds from the north, and the warm moist winds from the south, are alike enabled to sweep a very large part of the central hollow all up and down the whole continent—a matter of great climatic importance. The drainage of the N. E. is carried off by streams flowing to the Great Lakes and the St. Lawrence, of the coastal strip by the Penobscot, Connecticut, Hudson, Delaware, Susquehanna, Potomac, James, Roanoke, Savannah, and smaller streams, of the Central Plain by the Mississippi-Missouri system and its tributaries, and the Alabama, Sabine, Trinity, and smaller streams flowing direct to the Gulf of Mexico; of the S. W. by the Rio Grande del Norte (Gulf of Mexico) and the Colorado (Gulf of California), of the N. W. by the Columbia which breaks across the coast mountains, and of the rest of the W. coast by short rivers between the coast mountains and the sea. For the drainage and character of the district between the Rocky Mountains and the Cascade Range and Sierra Nevada see Great Basin. The large rivers of the Central Plain are navigable for long distances; those of the E. are chiefly of importance for manufacturing and harbour purposes (Hudson also for navigation); and those of the W. flow mostly through deep gorges and are, except the Columbia, of no commercial importance. Of the E. coast the northern part, as far as Long Island, is rocky and has many good harbours, the southern part is low and sandy, and broken only by the great openings of the Delaware and Chesapeake. Along the Gulf of Mexico the coast is low and swampy, fringed in places with shallow lagoons, with muddy bars at the river mouths, and with near the middle the long tongue of the Mississippi delta projecting some 50 m. out to sea. The western coast is but little broken, the only

openings in the whole line of high cliffs being at the extreme N. (between the boundary at Juan de Fuca Strait and the mouth of the Columbia River), and near the centre of the southern part (at the Golden Gate at San Francisco). The climate naturally varies considerably—from the winter snows and cold of the N. E., to the pleasant mildness of the Pacific slopes, and the sub-tropical conditions of the S. and S. E. The lowest mean temperature in January, at ordinary heights, is about Duluth where it is some 12° Fahr., with a minimum range of 46°; Chicago, 25°; New York, 30°; Florida, 70°; and San Francisco, 50°, while the means for July are: Duluth, 66°; Chicago, 73°; New York, 73°; Florida, 83°, and San Francisco, 59°. The minimum in January, at New York, often falls below zero, and the July maximum, all over the country, at ordinary heights, reaches above 100°. The rainfall E. of the meridian of 95° varies from over 60 to 25 in., and along the Pacific coastal strip may range up to nearly 90 in., but among the western hills, and on the western plateau, it drops in some places to about 2 in.

*Government.*—The main portion of the republic consists of a federal district, 45 states, and 4 territories (Oklahoma, New Mexico, Arizona, and Indian Territory), the distinction being in the form of local government possessed by each. The executive power lies with a President, who is chosen for four years by the votes of specially-chosen electors, equal to the number of senators and representatives to which each state is entitled in Congress (this depending on the population at the latest census), and appointed by the direct vote of the citizens of each state. The President is commander-in-chief of the army and navy and of the federal militia, and he has power to veto any bill till it has been passed by a two-thirds majority in both houses of Congress. The legislative power lies with Congress which consists of a Senate (two members from each state chosen by the state legislatures for six years), and a House of Representatives (elected for two years, the electoral unit being about 174,000). Each state has a Governor, a Senate, and a House of Representatives, charged with the regulation of state affairs. The population is 76,303,500, showing an increase of nearly 14,000,000 within the last ten years, and of nearly 50 per cent. (30 per cent. by immigration) within the last thirty years. Of the total number some 38 per cent. are workers actively employed, and of these nearly 40 per cent. are engaged in agriculture, fishing, and mining, 22½ in manufacturing and mechanical industries, over 14 in trade and commerce, and 19 in domestic and personal services. Over 25 per cent. are in the 153 towns having more than 25,000 inhabitants, three towns—New York, Chicago, and Philadelphia—have

populations of between 1,500,000 and 3,500,000, three—St Louis, Boston, and Baltimore—have between 500,000 and 700,000 ; five—Cleveland, Buffalo, San Francisco, Cincinnati, and Pittsburgh—have between 300,000 and 400,000 , and four—New Orleans, Detroit, Milwaukee, and Washington—have between 250,000 and 300,000

*Communications, &c*—The densely populated states have a network of convenient railway communications, and the whole railway system of the country, with a total mileage of some 200,000, is being rapidly and steadily extended. For trans-continental communication see Pacific Railways. The navigable waterways are of the utmost importance. There is an enormous amount of water-borne traffic in the Great Lakes (one-third of whole shipping trade of the country), and on the canals connected with them—Sault Ste Marie, Erie, Hudson River, Hudson and St Lawrence, Ohio to Susquehanna, and Lake Michigan to the Mississippi, &c., with a total length of some 4000 m—and to these has to be added the great traffic of the Mississippi-Missouri system (one-sixth of total traffic). Great value is attached to convenient communications, and for foreign trade, railways and steamship lines often combine, so that special low rates may be given for long distance export traffic, and the cost of the goods thus treated reduced in proportion on their arrival at their destination abroad.

*Productions and Resources*—With such an extent and variety of soil and climate, and a country extending over so many degrees of latitude, the United States has naturally an infinite variety of products, and might, indeed, were it cut off from communication with all other nations, be entirely self-supporting—able to provide for itself not only all the necessities, but even all the luxuries, of life. As may be gathered from what has been already said in regard to population, the United States has still, just as in the past, its main interest in its farm products of whatever kind, but the importance of its industries has in recent years been rapidly growing—the proportion exported being more than twice, the value more than thrice, as much within the last decade. Of a total of about 6,000,000 farms some 45 per cent are between 100 and 500 acres, 28 between 50 and 100, 20 between 20 and 50, and the bulk of the remainder still smaller. Of the country E of the meridian of 98° nearly two-thirds is under crop, the northern districts producing crops of the ordinary grains and green crops; the centre maize and tobacco, and the S cotton, with rice and sugar-cane in much smaller proportion. The most important grain crops are wheat, maize, and oats, the first covering an area of about 43,000,000 acres, and having a value, on the spot, of nearly £65,000,000, the second an area of over 83,000,000 acres, and with a value

on the spot of more than £150,000,000 ; and the third an area of over 27,000,000 acres, and having a spot value of about £40,000,000. The chief wheat-growing states are Minnesota, Kansas, North and South Dakota, California, Nebraska, Missouri, Pennsylvania, Iowa, Illinois, Texas, Oregon, and Washington, and the chief maize states Nebraska, Iowa, Kansas, Missouri, Illinois, Indiana, and Ohio. The oat area is in the N E. A large quantity of wheat is made into flour for export, and part of the maize is also ground, but the greater part of the surplus after export is used for the feeding of cattle and pigs. Grain crops of less importance are barley, rye, and buckwheat. The grain surplus for export (159,000,000 bushels) is 38 per cent. of the surplus supply of all the exporting countries of the world, and double that of the next in order which is Russia. The great cotton-producing states are Texas, Georgia, Mississippi, Alabama, North and South Carolina, Louisiana, and Arkansas, the most valuable area being the islands along the coast of South Carolina. The long-stapled Sea Island fibre there produced commands a price many times greater than that of the ordinary kinds. The area under cotton is over 27,500,000 acres, and the produce of more than 19,000,000 bales (or some 6,000,000,000 lbs) is valued at about £87,000,000. The most important tobacco states are Virginia, Kentucky, Maryland, North Carolina, and Tennessee, the annual production being over 700,000,000 lbs. Sugar-cane is grown in Louisiana, Texas, and Florida ; but the area under this crop has fallen off greatly since the abolition of slavery, the place of the cane product being taken by the beet-sugar of Nebraska, Kansas, New Jersey, Illinois, California, Colorado, and Utah, by the maple sugar of Vermont, New Hampshire, and other north-eastern states, and by the sorghum sugar of Kansas. Sorghum is also grown largely for feeding purposes. Of the total quantity of rice produced (some 290,000,000 lbs) about three-fourths come from South Carolina, the other producing states being North Carolina, Georgia, Mississippi, and Louisiana. There is production of hops in New York, Wisconsin, Washington, Oregon, and California ; of hemp, flax, and jute, in Kentucky, Tennessee, and Missouri, and of flax for seed in Minnesota, Kansas, Nebraska, Iowa, and Missouri, of apples, peaches, plums, pears, and other fruits of northern Europe, in New York, Ohio, Pennsylvania, Delaware, and California, and the last state, as well as New York, Ohio, and Missouri, has vines. In this connection, and in the production of wine (35,000,000 gallons) and raisins, California is most important. The cultivation of many tropical and sub-tropical fruits—oranges, lemons, bananas, pine-apples, &c—is also carried on with success in a number of the southern states and in California. To the W of the meridian of 98° a large portion of the

country is devoted to the rearing of stock, climate, soil, and wild grasses lending themselves readily to that purpose, and the crops produced are those that are of use for feeding purposes. The area of the ranching districts is estimated at over 1,350,000 m, and the value of the whole live stock is put at nearly £640,000,000, Iowa coming first with over £54,000,000, and Texas second with over £47,000,000. The latter has the greater value in cattle, but the former gains on other animals, especially swine. The total number of cattle is about 70,000,000, horses, over 21,000,000, mules, 3,500,000, sheep, 62,000,000 (wool-clip 280,000,000 lbs); swine, over 64,500,000, and goats about 2,000,000. The chief cattle states are Texas (over one-eighth of whole), Iowa, Kansas, Nebraska, Illinois, Missouri, New York, Wisconsin, Ohio, Pennsylvania, Minnesota, Indiana, Oklahoma, South Dakota, Indian Territory, California, Colorado, Michigan, and Kentucky, horses, Illinois, Iowa, Texas, Missouri, Kansas, and Ohio; mules, Texas, Missouri, Tennessee, Mississippi, Georgia, Kentucky, Arkansas, and Louisiana, sheep, Montana, Wyoming, New Mexico, Ohio, Utah, Idaho, Oregon, Michigan, California, Colorado, Texas, Indiana, New York, Pennsylvania, Kentucky, Illinois, Iowa, and Missouri, swine, Iowa, Illinois, Missouri, Nebraska, Indiana, Kansas, Ohio, Texas, Tennessee, Wisconsin, Kentucky, Arkansas, Alabama, Georgia, Minnesota, North Carolina, Mississippi, Pennsylvania, and Michigan, and goats, Texas, New Mexico, Alabama, California, and Oregon. Milk cattle are most plentiful in Vermont, Pennsylvania, New York, and Ohio, where there is considerable production of butter and cheese. Of the whole area of the country some 25 per cent are still under timber, but reckless clearing has done much harm, and there is need of systematic forestry to prevent waste and exhaustion. The largest tract is on the Atlantic side (over 350,000,000 acres), and the other great districts are the Pacific coast, the Rocky Mountains, and the central western states, each about 50,000,000 acres. In the W the timber consists mostly of different varieties of pine, including the redwood sequoia, and the giant big-trees, which reach a height of over 300 ft, but there are also cedars and laurels, on the Rocky Mountains and in the W, pines, oaks, and aspens, in the E, varieties of all the ordinary European timber trees, and hemlock, cedar, cypress, and hickory. The chestnut oak and the dyer's oak (the latter abounding in Pennsylvania, Carolina, and Georgia) are valuable for tanning and dyeing purposes. The western plateau has cactus, yuccas, mesquites (resembling the locust bean), creosote bush, and sage brush. The annual amount of wood cut is estimated at 40,000,000,000 ft. (three-fourths pine and fir), and the value of the raw material

is put at about £50,000,000, and of the products at £90,000,000. The country has an important share in the E coast mackerel, cod, &c, fishing, particularly on the Great Bank of Newfoundland, and a considerable amount of attention is given to both northern and southern whale-fishing, and to fur-sealing. The salmon fishings of the W. are also of great value. The United States is very rich in minerals, the total output being valued at over £223,000,000. It used to produce more gold than any other country in the world, but in 1898 the Transvaal passed it and took first place. The chief gold states are Colorado, California, Nevada, Montana, Idaho, and South Dakota, and the total output is valued at nearly £16,000,000. Silver is found in large quantities in Nevada, Idaho, Utah, Colorado, and Montana, the annual product being valued at over £7,000,000. In the eastern half of the States the coalfields extend over an area of more than 200,000 m, and it is estimated that the coal-bearing strata of the western part cover an equal extent. The richest field is the Appalachian, which extends from Pennsylvania to Alabama. Pittsburg is the centre, and Pennsylvania alone has nearly 50 per cent of an output of over 266,000,000 metric tons (one-third of the world's supply, and more than that of any other country) valued at £60,000,000, after which come Illinois, West Virginia, and Ohio. All the remaining states produce among them about two-sevenths of the total output. Pennsylvania turns out a large amount of anthracite, small quantities of which are also got from Colorado and New Mexico. In the centre the leading states are Illinois, Indiana, and Kentucky, and farther W Iowa, Missouri, Wyoming, Montana, and Colorado. Iron is found in the NE in Minnesota, Wisconsin, and Michigan; in Alabama, and Tennessee, and in Pennsylvania, New Jersey, New York, Virginia, West Virginia, Ohio, Illinois, and Missouri, and the working and manufacture are much facilitated and cheapened by the fact that iron and coal are often found together, and that both lie near the surface. Of a total production of about 30,000,000 tons, 38 per cent come from Minnesota, 33 from Michigan, and a little less than 10 from Alabama. The production of pig-iron, more than 16,000,000 tons, is valued at over £50,000,000. The production of petroleum (nearly half the world's supply) is about 70,000,000 barrels, each barrel containing 42 gallons (total value £13,500,000), the chief states being Ohio, West Virginia, Pennsylvania, California, Indiana, Texas, and New York. The natural gas connected with the coal and iron districts is got from some 11,000 bores, to the amount of more than 180,000,000,000 cubic ft, valued at over £6,000,000. The great copper states are Montana, Michigan, and Arizona, which have 38, 26, and 22 per cent,

respectively, of a production of 273,000 metric tons, value nearly £18,000,000—more than half of the world's production. The output of lead (mainly from Idaho, Colorado, Utah, and Montana) is 270,000 tons, valued at over £4,500,000, zinc (Arkansas, Kansas, Illinois, Missouri, New Jersey, Wisconsin, and Colorado), 170,000 tons, value more than £2,700,000, cement (Pennsylvania, New Jersey, New York, Ohio, and Michigan), valued at over £3,000,000, brick clay at over £2,500,000, salt (largely Michigan and New York), and phosphates (Florida, South Carolina, and Tennessee) each over £1,000,000, and of less, though considerable, importance are limestone (for flux) and gypsum, quicksilver (California, and a little from Oregon, and Texas—over one-third of the world's production), and pyrites.

*Manufactures*—Only within a comparatively recent period have the manufactures of the United States come to be of great importance, but so well have the high protective duties fostered the infant industries, that not only do the home products now supply the home market, but in many lines there is a large surplus left with which American manufacturers and merchants are entering into keen competition with those of other countries in every market almost all over the world. The busiest industrial states are New York and Pennsylvania, but the manufactures are of supreme importance all over the north-east (water-power, coal, iron, timber, and good and convenient transport), and in them Maine, Massachusetts, New Hampshire, Maryland, Illinois, Ohio, and Michigan, all take a leading part, while in cotton manufacture the factories of the southern states are now able to give a good account of themselves with about one-eighth of the total output. In cottons America is second only to Great Britain, the industry being mainly centred in the New England States; woollens (carpets, &c.) in the north-eastern states, Pennsylvania, and Massachusetts, &c., silks in New Jersey, New York, and Pennsylvania, iron and steel goods of all kinds, and machinery, in connection with the coal and iron fields—locomotives, fire-engines, agricultural and mining machinery, sewing machines, fire-arms, type-writing machines, stoves, safes, tin-plate (industry developed by protection, greatly to injury of import from Great Britain), brass and bronze goods, silver-plated ware, nickel-plated ware, all of importance—making of leather, boots and shoes, saddlery, &c., rubber goods, chemicals, musical instruments, clothing, paper, surgical instruments, railway carriages (Pullmans, &c.), glass, watches, clocks, and jewellery. There are also flour mills (value of flour, £120,000,000 a year), saw mills, sugar and oil refineries, blubber works, ship-building; tinning and preserving of meat, fish, shell-fish, fruit, &c., breweries, distilleries, and tobacco works. The produc-

tion of steel is over 10,000,000 tons, and the export of steel rails is valued at over £2,200,000. The manufactures are increasing by leaps and bounds, and not only is the United States already pressing other industrial countries—Great Britain in particular—in foreign markets, but the competition is likely to become keener and keener, while the recent enormous purchases of Atlantic shipping will enable the States to have a very important say in the question of freights, and thus ability to send goods abroad as cheaply as possible. Even in our own home market, in certain lines, such as particular kinds of metal goods, machinery boots and shoes, &c., the competition is making itself felt, and in view of all this it behoves us to consider how we can both hold our own and try to recover lost ground. The United States raw material is in many cases cheaper, of course, but on the other hand wages are higher, and so in many lines there seems to be no particular reason why we should not be able to turn goods out quite as cheaply as our competitors across the Atlantic. The great points seem to lie in organisation of business on a much larger scale, and in the keen business method, and thorough up-to-date workshop equipment, of the United States employer. Large capital and works mean increase of output and profit without proportionately large increase of cost of management and other expenses of a like kind, and they mean also the power of putting down new plant the moment anything better than that already in use becomes available, the employer is keen, watchful, and persevering, and devotes himself entirely to his business as his first interest in life (see Chicago and Great Britain), the inventive genius of the race lends further aid, and something new in time- or labour-saving machinery is constantly being tried. Everything too that can be standardised is standardised, and so there can be greater division of labour and economy of time. Each man turning out only one particular thing becomes so expert that he can turn out much more in a given time, and so increase the profit on the capital invested in the machine. Parts too require less fitting, and a supply can always be kept in stock ready for use. Of course this may have its drawbacks in the shape of loss of individuality. Furniture, for example, turned out article after article exactly the same and met with in house after house, would produce the effect of a wholesale succession of barrack rooms, or five-hundred-room hotels, but such methods of manufacture mean cheapness, and cheapness is a great factor in the command of the every-day market. The workmen on their part seem able to second their masters. The men are encouraged to suggest improvements in methods and in machinery, and receive a fair proportion of the resulting profit if their suggestions be put in practice. The mach-

inery is as a general rule run at a much higher speed than in Great Britain, but this, to the man employed, means greater gain, as the larger sums he is able to earn are never made an excuse for "cutting" rates. Abnormal output, indeed in some cases, produces an abnormal rise in pay. If we are to succeed in the battle we must proceed on similar lines. A sound basis of education, thorough organisation of both capital and labour, economy of time, economy of labour, the most modern machinery, the most scientific methods, and rational co-operation of employer and employed, these must be our methods if Britain is to keep her place in the commercial and industrial world.

*Imports and Exports*—In the present value of imports (nearly £180,000,000) the United States takes the fourth place among the commercial countries of the world, being surpassed by the United Kingdom, Germany, and France, but in the value of exports (some £295,000,000) it takes the second place, being surpassed only by Great Britain; while in the total trade it comes third. The chief article of import is sugar (£18,000,000), after which comes coffee (£12,500,000), chemicals (including drugs and dyes), hides and skins, manufactures of cotton, manufactures of fibres (including textile grasses, &c.), unmanufactured silk, crude rubber and gutta-percha, and manufactured silk have each a value of between £11,000,000 and £5,000,000; unmanufactured fibres (including textile grasses, &c.), diamonds and other precious stones, tin (bars, blocks, or pigs), wood and manufactures thereof, fruits (including nuts), tobacco and manufactures thereof, and manufactures of iron or steel have each a value of between £5,000,000 and £3,000,000, manufactures of wool (including camels' and goats' hair, &c.), liquors (spirits, malt, and wine), unmanufactured wool (including camels' and goats' hair, &c.), leather and manufactures thereof, furs and manufactures thereof, and tea, have each a value of between £3,000,000 and £2,000,000, copper and manufactures thereof, earthenware (including stoneware and china), fish, oils, cocoa and cacao, raw cotton, metals and manufactures thereof, bituminous coal, and glass ware, between £2,000,000 and £1,000,000; and of less value are animals, toys, paper, and manufactures thereof, and books (also maps, &c.). The leading exports are raw cotton (over £62,000,000), bread-stuffs (£55,000,000), provisions—meat and dairy products—(nearly £40,000,000), iron and steel and iron and steel manufactures (over £25,000,000), mineral oils, wood and manufactures thereof, and animals, have each a value of between £15,000,000 and £10,000,000, copper and manufactures thereof, tobacco and manufactures thereof, and leather and manufactures thereof, each between £10,000,000 and £5,000,000; coal, manufactures of cotton, vegetable oils, oil cake and oil-cake meal, agricul-

tural implements, chemicals (including drugs, dyes, and medicines), naval stores, and fruits (including nuts), each between £5,000,000 and £2,000,000; carriages (including cars, &c.), scientific instruments, paper and manufactures thereof, fish, paraffin and paraffin wax, seeds, and fertilisers, each between £2,000,000 and £1,000,000, and of less value are furs and skins, manufactured fibres (including textile grasses, &c.), sugar and molasses, glucose, rubber manufactures, grease, books (with maps, &c.), spirits, cycles, vegetables, and starch. Of the imports 32 per cent. are raw materials; over 16, articles manufactured and ready for consumption; about 9, articles partially manufactured or requiring further work; and the remainder food and animals, luxuries, &c. Of the exports over 70 per cent. are unmanufactured articles—of which 90 per cent. (61 per cent. of whole) are agricultural products—and 28 manufactured articles. More than half of the imports come from Europe—some 36 per cent. of this from the United Kingdom, 21 from Germany, and 18 from France, after which come Italy, Holland, Switzerland, Belgium and Austria-Hungary; more than one-sixth from other parts of North America—British North America nearly one-third of this, about one-eighth from South America—Brazil two-thirds of this; one-seventh from Asia—over one-third of this from the British East Indies, and one-fourth from Japan, next to which come the Dutch East Indies, and China. More than three-quarters of the exports go to Europe—over half of this to the United Kingdom, and about one-sixth to Germany, after which come Holland, France, Belgium, Italy, Spain, and Sweden and Norway, a little less than one-eighth goes to other parts of North America (British North America over half of this), less than one-thirty-third to South America (mostly Brazil and the Argentine), and less than one-thirtieth to Asia (three-eighths to Japan, about one-fifth to China). Of the exports alone New York sends out about 37 per cent, Boston, 10, Baltimore, 9, Galveston, 7, New Orleans, 6, Philadelphia, 5; and San Francisco, 3; and of the total trade, both imports and exports, New York has 45; Boston, 9; New Orleans, 7; Baltimore and Philadelphia, about 5½ each, Galveston about 4½, and San Francisco, 3. Nearly three-quarters of the trade is on the Atlantic coast, one-seventh on the Gulf of Mexico, and one-twentieth on the Pacific. The exports from the United States to the United Kingdom are valued at some £140,000,000, the leading articles being cotton and bread-stuffs (wheat, flour, maize, &c.), each about £30,000,000, meat (bacon, beef, hams, pork, &c.), about £23,000,000; live stock (mainly oxen and bulls), over £8,000,000; metals (copper, lead, &c.) and manufactures thereof, wood and wood-work, tobacco, lard, petroleum, leather, machinery, oil-seed cake,

cheese, and fruit, between £5,000,000 and £1,000,000, and of less value are paraffin, fish, turpentine, butter, skins and furs, paper and paper-pulp, glucose, hardware (other than cutlery), tallow and stearine, rubber manufactures, seeds (clover and grass, cotton, linseed), rosin, electrical goods, raw coffee, seed-oil, implements and tools, hay, molasses, musical instruments, hops, scientific instruments, starch, soap and soap-powder, chemical products, drugs, oleo-margarine, and poultry and game. The imports into the United States from the United Kingdom are valued at about £37,000,000, nearly equally divided between articles of British produce and manufacture and re-export of foreign and colonial goods. Of the former the leading articles are cottons and linens (each a little over £2,500,000), iron (wrought and unwrought), woollens and worsteds, and jute manufactures—these three between £2,000,000 and £1,000,000, and, of less value, chemicals, skins and fur, machinery and millwork, earthen and china ware, wool, printed books, spools, cotton yarn, rags (and other materials for making paper), beer and ale, silk manufactures, and leather (wrought and unwrought). Of the foreign and colonial goods sent the chief are tin (blocks, ingots, bars, and slabs), copper (of all kinds), cotton, undressed goat-skins, wool, hemp, and jute manufactures (all these between £2,000,000 and £1,000,000), and, of less value, caoutchouc, lace, leather, raw hides, furs, woollen manufactures, sheep-skins, ornamental feathers, opium and other drugs, indigo, and earthen and china ware. The United States mercantile marine has a tonnage of over 5,500,000 of which more than half belongs to Atlantic and Gulf ports, about two-sevenths to the Great Lakes, under one-eighth to the Pacific ports, and about one twenty-fourth to the central rivers. Of the whole only 900,000 tons were in 1902 registered for foreign service, as the United States has not had, since the civil war of 1860-65, any large share of its own foreign carrying trade, though the great shipping trusts organised within recent years will no doubt effect a considerable change. Of a total of some 60,000,000 tons entered and cleared in the foreign trade in 1901, nearly four-fifths belonged to other countries, Great Britain having then more than two-thirds of the foreign tonnage, Germany over one-ninth, and Norway about one-thirteenth. Before the civil war the value of the foreign trade carried in ships belonging to the country was over 65 per cent, in 1901 it was about 8. There are British consuls-general at New York and San Francisco, and consuls and vice-consuls at all the leading centres. Mails from and to London twice a week or oftener, letters, 2½d per half-oz., postcards, 1d; parcels, to New York City, Brooklyn, Jersey City, or Hoboken, under 3 lbs 1s., between 3 and 7, 2s., between 7 and 11, 3s., to all other places 1s more in each

case, money orders to and from, telegrams, from 1s to 1s 6d a word, according to state.

*Money, &c*—The unit of account is the dollar=100 cents.=49 32d or 4 86 dollars=20s. The weights and measures are mainly as in Great Britain, but the old Winchester bushel=969 imperial bushel is used, the wine gallon is five-sixths of an imperial gallon, and the ale gallon is=1 0169 imperial gallon. Instead of the British hundredweight a cental=100 lbs is employed, and the ton is often a metric ton of 2204 lbs, while there is also the ordinary ton (long ton) of 2240 lbs, and a short ton of 2000 lbs. The United States flag has alternate horizontal bars of red and white (7 red, 6 white) with the upper quarter next the staff blue. On this blue ground 45 white stars are arranged in five horizontal rows—one star for each state and territory in the main portion of the republic, the Indian Territory not being taken into account.

*Ural Mountains*, the series of ridges (running in various directions) which form the physical boundary between European and Asiatic Siberia, with a total length of about 1500 m, a height of a little over 1300 ft. in the N, over 5500 ft farther to the S, 3000 to 5000 in the centre, and 3000 to 5400 at the S end, rich in minerals, with gold, iron, copper, platinum, silver, coal, salt, malachite, precious stones, &c, and producing considerably more than half of the whole pig-iron of Russia; ranges crossed by the railways from Perm to Ekaterinburg and Trumen, and by the Siberian Railway between Samara and Ufa. The *Ural River* has a course of nearly 1400 m from the S end of the Ural Mountains to the Caspian Sea, forming along that part of its course the boundary between Europe and Asia, considerable fisheries, especially in the lower part.

*Uruguay*, a small republic of South America to the N of the Rio de la Plata, lying between 30° and 35° S, and between 53° and 59° W, bounded NE by Brazil, SE by the Atlantic, S by the River Plate, and W by the Argentine Republic (from which it is separated by the Uruguay River). The length and width are each about 300 m, the area about 72,210 m, the coast-line along the Atlantic 120 m, the line of the Plate 190, and the Uruguay boundary over 200. The surface is flat, with low ridges of hills reaching an extreme height of about 2000 ft. The drainage of the centre is carried off by the Rio Negro, which flows to the Uruguay, and the rest by smaller tributaries of the latter river, and streams flowing to the Plate and to the sea. There is a hot season (November to April), and a cold season (May to October), with wet weather at beginning and end. The temperature ranges from 35° to 90° Fahr, and the rainfall, 43 in at coast, decreases inland. There are over 1000 m of railway, and over 5200 m of good

roads, while the rivers supply excellent water communication. The pop is 931,000.

The great industries are the rearing of cattle, and in the S. and W. of sheep (the country containing some 5,000,000 of the former and 16,000,000 of the latter), and connected with these are extensive exports of meat, wool, and animal products—jerked beef, meat extracts (Fray Bentos, Liebig's extract—Leinco), live stock (horses, mules, oxen, sheep), blood, bones, hides, leather, horseshair, &c. There are also exports of wheat and maize (the chief crops), and of wheat flour, and production of grapes (wine), tobacco, and olives—total area under crop probably about 1,800,000 acres. Maté grows, so do also many dye, gum, resinous, and medicinal plants—agave, rubber plants, carobs, quebracho, &c. Gold and copper are worked, and lead, silver, mercury, tin, iron, manganese, lignite, cobalt, amethysts, and opals are found. The exports are valued at about £6,000,000 (nearly 90 per cent animal products—wool, and hides and skins over one-fourth each, jerked beef over one-fifth, and extract of beef and tallow one-tenth each), and the imports at £5,000,000. The chief articles entering the country are machinery, provisions, textiles, and apparel and haberdashery. Of the imports 28 per cent go from Great Britain, 11 from Germany, 10 from Italy, and 9½ from France, and of the exports over 19 per cent go to the Argentine, 19 to Brazil, almost 16 to Belgium and the same to France, 12 to Germany, and 6½ to Great Britain. This country might supply the rice and codfish just as easily as Germany. The imports received by Uruguay from Great Britain (total value over £1,600,000) are chiefly coal, cottons (each one-fourth), iron, woollens and worsteds, machinery, and jute goods. The exports sent by Uruguay to the United Kingdom (total value over £450,000) are chiefly wool, caoutchouc, preserved meat, maize, raw hides, and tallow. There is a mercantile marine of 23,000 tons, and the tonnage entered and cleared amounts to nearly 4,500,000. There is a British consul-general at Montevideo, and several vice-consuls. Mails from and to London every week, letters, 2½d per half-oz., postcards, 1d, parcels, under 3 lbs., 2s., between 3 and 7, 3s., between 7 and 11, 4s., money orders to and from, tele-

grams, *vuè* France, 3s 11 a word; other routes, 4s. 2d. The coin of account is the silver peso or dollar valued at a little over 4s. The metric system has been officially adopted, but the old weights and measures (*see* Spain) are still in use; league=5½ m. (nearly), square league=10½ m.; cuadra=18 acre. The Uruguay flag has alternate horizontal bars of white and blue (5 white, 4 blue), with, in the upper corner next the staff, a square filled by a golden sun-face with rays spreading to the edges.

Uruguay River, a river flowing from Brazil to the River Plate, with a length of about 1000 m., can be ascended by largest vessels 200 m. to Paysandu, and by coasters other 60 m. to Salto, above the Salto rapids, round which goods are carried by rail, it is again navigable by river steamers.

Ushant, an island off the W coast of the department of Finistère, France, 27 m W by N of Brest, with a lighthouse at the N.W. extremity visible for 21 m. Area, 20 m. Pop 2500.

Utah, one of the inland western states of the United States, lying among the western ridges of the Rocky Mountains, the Wahsatch Mountains which run through (roughly N. and S.) reach a height of between 12,000 and 13,000 ft., and the Uintah Mountains in the N.E. rise at their highest point to about 14,000 ft.; in the N.W. is the Great Salt Lake, rainfall over a great part of the state very small and irregular, but the soil is fertile wherever irrigation water can be obtained; silver, copper, lead, gold, coal, asphalt, and salt. Area, 82,190 m. Pop 277,000.

Utica, a town of New York State, United States, 232 m by rail N.N.W. of New York City, and with water communication by the Mohawk River and Erie Canal, railway and canal centre, trade in cheese, and manufactures of machinery, boots and shoes, iron and brass ware, cottons and woollens, organs and pianos, starch, &c. Pop 56,500.

Utrecht, the chief town of a province of the same name in Holland, on the Old Rhine, with canal communication by the Vecht and Lek, 38 m by rail E.N.E. of Rotterdam, with manufactures of carpets and other woollens, silks, velvets, tobacco and cigars, plate-glass and earthenware, tiles, chemicals, machinery, gun, &c. Pop 104,500.

## V

Valais, a border canton of Switzerland N. of Italy, surface a deep valley about 80 m long and 2 m wide, between the Pennine and Bernese Alps, drained by the Rhone, a little coal, iron, lead, and zinc, silkworms, glass, sugar. Area, 2027 m. Pop 114,500.

Val de Travers, a valley of Neuchâtel, Switzerland, with asphalt obtained by mining from beds of some 18 ft in thickness.

Valdivia, a port, the chief town of a province of the same name, south Chile, on the Valdivia River 12 m up from the sea, with exports of leather, gold, wheat, oats, wool, horseshair, &c. British vice-consul. Pop 8000.

Valence, the chief town of the department of Drôme, France, on the Rhone, 66 m by rail S of Lyons, with manufactures of silk, glass, and iron, dye-works, &c. Pop 27,000.

Valencia, a port of centre E. Spain, the chief town of a province of the same name, on the Guadalquivir 3 m up from the sea, and with railway communication along the coast both ways, bar dredged, and harbour takes vessels of 23 ft draught, imports coal, iron, petroleum, sulphate of ammonia, codfish, guano, and provisions, and exports olives and olive-oil, oranges, lemons, grapes, melons, almonds, figs, and other fruits, onions, wine, raisins, &c, spinning and weaving of silk, tiles for flooring, linen, cigars, leather, &c. The province is one of the richest in Spain, with important deposits of lead, copper, cobalt, coal, mercury, and other minerals, production of fruits already mentioned, and dates, carobs, rice, &c.; manufactures of silks, rope and cloth made from esparto grass, cigarette paper, woollen cloth, &c. Regular communication from London, Hull, Glasgow. Distance from London, 1740 m, Liverpool, 1665, Glasgow, 1775, Cardiff, 1560. British vice-consul. Area of province, 4352 m. Pop 776,000; pop of town, 205,000.

Valenciennes, a town of the department of Nord, France, on the Scheldt, 155 m by rail N N E of Paris, coalfield all round. The fine lace bearing the name of the town is no longer made here, but there are still manufactures of coarse lace, lawn, cambric, hosiery, linseed oil, beet-sugar, and iron and steel cables and other iron goods. Pop 31,000.

Valentia, or Valencia, an island of Kerry, Ireland, off the W. coast, S of Dingle Bay, 5 m long by 2 wide, with slate quarries, and the station at the British end of five telegraph cables, which extend over 1852 m from here to Heart's Content, in Newfoundland.

Valladolid, the chief town of a province of the same name, north centre Spain, on the Pisuerga, 150 m by rail N.W of Madrid, with a trade in grain, and manufactures of woollens, cottons, and silks, iron ware, chemicals, gloves, paper, &c. Area of province, 3043 m. Pop 276,500, pop of town, 69,000.

Valparaiso, the chief seaport of Chile, the chief town of a province of the same name, on the Pacific, on Valparaiso Bay, 115 m by rail N N W. of Santiago, and 887 W of Buenos Ayres, by the Transandine Railway. The bay is, between May and September, dangerous owing to "northers", depth outside of mole 40 ft or more, inside 30 to 32 ft, but vessels mostly load and discharge by lighters. Valparaiso imports nearly three-quarters of the whole of the goods brought into Chile, the leading lines (total value about £9,000,000) being coal, iron, lumber, petroleum, iron and steel, machinery and hardware, cottons, carpets and other woollens, boots and shoes of all sorts, and provisions and general goods. The exports, about one-fifth of those of the whole of the country, are nitrate, copper ore, hides and skins, silver, wheat and flour, wool, tallow, gold, &c. The bulk of

the trade is with Great Britain. Regular communication from London and Liverpool. Distance from London, 8870 m, Liverpool, 8795; Glasgow, 8900, Cardiff, 8690, Montevideo, 2750. Letters, *via* Magellan, 33 days, *via* Panama, 41 days. British consul-general. Pop 122,500.

Vancouver, a port of British Columbia, Dominion of Canada, on Burrard Inlet; the western terminus of the Canadian Pacific Railway, 2906 m by rail W of Montreal; harbour takes vessels of the largest size, and has a depth at the quays of 30 ft or over; imports iron, steel, tin-plates, salt, and general goods, exports gold, silver, lumber, coal, tinned salmon, copper ore, sugar, fruit, &c; since the opening of the Canadian Pacific Railway, great centre of growing trade with Australia, Japan, China, Hawaii, the Fiji Islands, and other parts of the East, regular steam lines to all these, also for Klondyke, Puget Sound, Portland, and San Francisco, and other towns of the Pacific coast of the United States have land communication, *via* Mission Junction, by the Bellingham Bay and British Columbia Railway; manufactures of iron ware, sugar, cement, &c. Distance from Vancouver to New York, *via* Brockville, 3163 m, Boston, *via* Montreal, 3248, Yokohama, 4283, Hong-Kong, 5936, Calcutta, 8987; Honolulu, 2410, Fiji, 5190, Sydney, 6960; Liverpool, *via* Montreal, 5713, London, *via* Suez Canal, 15,735. By Vancouver the distance between Yokohama and Liverpool is 10,047 m, between Sydney and Liverpool, 12,673, between Hong-Kong and Liverpool, 11,649, all distances considerably shorter than along the route *via* San Francisco, as well as those *via* New York and Portland, Oregon. Letters, 15 days; parcels, 18. Pop 7500.

Vancouver Island, an island of British Columbia, Dominion of Canada, separated from the mainland on the N E by Queen Charlotte Sound, Johnstone Strait, and the Strait of Georgia, which have a width varying from  $\frac{1}{2}$  to 2 m, and on the S by the Juan de Fuca Strait, which has a width of about 2 m. The length is about 270 m, and the extreme width about 70; surface mountainous, reaching an extreme height of over 7000 ft, the hillsides being covered with timber, important deposits of coal at Nanaimo and Comox on the E coast, as well as elsewhere, and there are also deposits of gold, silver, copper, and iron, good fishing off the coast. The chief town is Victoria, in the S. end of the island, which has an outer harbour, approached by a channel with a depth of 30 ft, and with 30 ft. at quays, 16 ft at the quays in the inner harbour, dry dock 451 ft long, with a depth of 36 ft on the sill; imports iron, steel, tin-plate, salt, and general goods of all kinds; exports coal, lumber, gold, tinned salmon, seal-skins, furs, oil, copper ore, &c. Three miles to the W is Esquimalt. Area of island, 15,937 m. Pop 62,000, pop of Victoria, 21,000.

Vannes, a port of the department of Morbihan, France, off the Lagoon of Morbihan 10 m from the sea, manufactures of woollens, and ropes, shipbuilding, oysters, &c. Pop 23,500

Var, a department of S E France, on the Mediterranean coast, mild winters, with Hyères and other health resorts along the coast, forests, olives, vines, oranges, figs, tobacco, silkworms, wheat, &c; lignite in various places, and some iron, salt from salt-marshes, cork manufacture Area, 2349 m. Pop 326,500

Vardo, a port of Norway, on an island of the same name, 170 m E S E of Hammerfest, with extensive spring fisheries, and exports of salted and dried fish, whale oil, cod-liver oil, fish manure, &c British vice-consul Pop 3000

Varna, a town of Bulgaria, on the Black Sea, with an anchorage in 4 to 5 fathoms, ships loading and discharging by means of lighters, imports coal, pig-iron, oil, provisions, and general goods, and exports grain, hides, tallow, cheese, dried beef, wool, and leather. Of 180,000 tons entered and cleared over one-third are British. Regular communication from London and Liverpool Distance from Odessa, 240 m British vice-consul. Pop 33,500.

Vaucluse, a department of S E France; wheat, grapes, olives, and other fruits, and silkworms; some little manufacture of silks, woollens, &c, truffles, lignite, and sulphur Area, 1370 m. Pop 237,000

Vaud, a canton in the W. corner of Switzerland, N and E of the Lake of Geneva, mountains reach an extreme height of over 10,600 ft., but there are extensive plains sloping to the Lake of Geneva and the Lake of Neuchâtel, good white wines, cattle-rearing, tanning, condensed milk, tobacco and cigars, musical boxes, clocks, &c. Area, 1244 m Pop 281,500

Vendée, a department of W France, with a coast-line of 90 m along the Bay of Biscay, salt-marshes on the coast, wheat, and colza, and some weaving Area, 2588 m Pop 441,500

Venezuela, a republic in the N of South America, lying between 1° and 13° N, and between 60° and 73½° W, and bounded N by the Caribbean Sea and the Atlantic, E by British Guiana, S by Brazil, and W by Colombia The greatest length from E to W is about 900 m, the extreme width 800 m, the area about 420,000 m, and the coast-line, which has a number of good harbours, 2000 m The surface has low, partly swampy, partly forest-covered, ground in the N W round Lake Maracaibo, mountains (outspurs of the Cordillera) running by the south-eastward to Lake Maracaibo and out to sea at Caracas (7000 to 15,500 ft.), great llanos (one-fourth of whole area) between this and the Orinoco, and mountains again S of the Orinoco (4000 to 8000 ft.) The drainage of the centre and S is carried off by the Orinoco and its tributaries The climate is healthy (except in the marshy districts),

temperature varying with height; but the annual mean along the Orinoco—the warmest part—is about 83° Fahr The snow-line is about 15,000 ft. The rainfall is abundant, there being, in the centre, regular wet seasons, between May and October and again in November. There are over 500 m of railway, and, while the Orinoco and its tributaries and Lake Maracaibo provide excellent water communications, of great value for the development of the country, the roads are bad, being in most cases mere tracks fit only for pack animals or, here and there, for very small carts. The pop is estimated at 2,500,000 The country is exceedingly rich in natural resources and has good means of developing them, but it is unfortunately constantly disturbed by rival factions struggling for power, and suffers greatly in consequence. The forests have fibre trees, rubber-plants, balsams (copaiba, &c.), cinchona, gums (copal, &c), vanilla, sarsaparilla, divi-divi, and furniture and dye-woods, and the llanos provide pasture for very large herds of cattle, whose hides form an important article of export—over 2,000,000 cattle, over 1,600,000 pigs, but were the country at peace these would, probably, soon be multiplied four-fold The soil is exceedingly fertile, and, probably, nearly two-thirds of the area are fit for cultivation, and would produce further heavy crops of wheat, barley, cotton, cacao, indigo, rice, and rubber. Besides food-stuffs (maize four crops in the year) there are large crops of coffee and cacao, and lesser quantities of sugar-cane, bananas, indigo, cocoa-nuts, tobacco, cotton, and tropical fruits The output of gold is valued at nearly £200,000, and copper, silver, iron, coal, and salt are worked to a small extent, while something might be made of lead, quicksilver, tin, china-clay, sulphur, petroleum, and asphalt. The imports (total value say £2,500,000) are chiefly cottons, provisions (flour, salt meat, &c.), hardware, kerosene, coal, machinery, and cement Some 47 per cent of them come from the United States, and about 28 from the United Kingdom The exports (total value say £4,000,000) are chiefly coffee (France, United States, and Germany), cocoa (France, Spain, and Germany), and hides (United States); but also of value are rubber, goat and deer skins, copra, cattle, tobacco, fustic, divi-divi, quina bark, copaiba, sugar, and fish sounds. Of the whole exports 60 per cent. go to the United States, and about 3 to the United Kingdom Of articles of British produce sent to Venezuela (total value £500,000) the chief are cottons (68 per cent), woollens, jute goods, linens, iron, implements and tools, and coal, of the articles sent by Venezuela to the United Kingdom (total value say £100,000) the chief are gutta-percha (78 per cent), and ornamental feathers. Half the produce sent to the United States is coffee, and the articles received from

that country are chiefly cottons, iron, machinery, wheat and flour and other comestibles, and chemicals. There are British consuls at Caracas and Bolivar, and several vice-consuls. Mails from and to London every fortnight; letters, 2½d. per half-oz., postcards, 1d.; parcels, under 3 lbs, 3s 8d.; between 3 and 7, 4s. 1d.; between 7 and 11, 4s 6d.; telegrams, from 7s. 2d. to 7s. 7d. a word, according to place. The coins of account are the bolivar, nominally equal to a franc, and a supposed peso, worth 4 bolivars. The silver dollar is worth 5 bolivars. The official legal weights and measures are metric, but the old Spanish weights and measures (*see* Spain) are still in general use. The flag of Venezuela has three horizontal bars, the top one yellow, the centre blue, and the lower red; on the inner part of the top bar, over two laurel branches, is a shield with symbolic devices, and on the inner part of the centre bar are six stars.

Venice, a port of N Italy, the chief town of a province of the same name, on over 100 islands in the Lagoon of Venice at the head of the Adriatic, 23 m. by rail E of Padua, 165 E. of Milan, 182 NNE of Florence, and 1036 (rail, &c) from London, with great manufactures of all kinds of glass, gold and silver jewellery and embroidery; mosaics, damasks, brocades, velvets, lace, wax and spermaceti candles, artistic bronzes, cottons and linens, tobacco, chemicals, hemp fabrics and ropes, leather, gloves, &c., ship-building, iron smelting, making of iron ware, government arsenal, which turns out armoured vessels and manufactures cannon; communication takes place along canals, and the city is connected with the mainland by a railway viaduct 2½ m long, great transit trade. Vessels drawing 27 ft. can reach the harbour, dry docks 295 and 525 ft long, and with a depth of 19½ and 28½ ft. on sills. Imports (total value about £13,000,000), cotton, woollen, and silk, fabrics and yarns, wheat and other grains, wine and spirits, raw cotton, coal, live stock, oil, metals, fruit, petroleum, hides and leather, books, glass beads and enamels, hemp, cheese, timber, drugs and medicines, salted fish, raw silk, butter, oil-seeds, &c., exports (total value over £12,000,000), silk, woollen, and cotton, fabrics and yarns, wheat and other grains, wine and spirits, metals, raw cotton, oil, petroleum, hides and leather, hemp, coal, timber, drugs, &c., hardware, raw silk, butter, tobacco, fruits, glass beads and enamels, &c.—much of both export and import to be goods in transit to or from central Europe. Of both imports and exports the United Kingdom has about £900,000. Of 2,800,000 tons entered and cleared some 21 per cent are British. The Lagoon is a great shallow lake 4½ m. long, by 6 wide. Time for noon at Greenwich, 12.50 PM. Regular communication to London, Liverpool, and Hull. Dis-

tance to London, 2980 m.; Liverpool, 2900; Glasgow, 3015; Cardiff, 2800; Brindisi, 390; Trieste, 67. Letters, 1½ day; parcels, 3 days 4 hours. British consul. Area of province, 934 m. Pop. 400,000; pop. of town, 152,000.

Vera Cruz, the chief seaport of Mexico, in a state of the same name, on the Gulf of Mexico, 263 m by rail ESE of Mexico City, with a depth of 33 ft in channel, and from 28 to 30 ft alongside quays; imports (total value nearly £4,500,000—over one-fifth from United Kingdom, France and United States nearly as much, Germany somewhat less), textiles, metals and metal ware, raw cotton, jute, and flax, machinery, quicksilver and other mineral products, animals and animal products, wines and spirits, paper and paper articles, chemicals and drugs, &c., exports (total value some £2,300,000—nearly one-third to United Kingdom, mostly ores, over one-third to United States, one-tenth or less to Germany, France, and Spain), gold and silver, coffee, tobacco (raw and manufactured), beans and peas, broom root, hides and skins, vanilla, rubber, cabinet woods, dye-woods, &c., tobacco manufacture. Of 1,800,000 tons entered and cleared over 30 per cent are British. Regular communication from London and Liverpool. Distance to Havana, 810 m. British consul. Area of state, 29,201 m. Pop. 960,500; pop. of town, 24,000.

Vermont, one of the New England States of the United States, undulating and hilly, reaching an extreme height of over 4000 ft, iron, manganese, china-clay, marble, and salt, large production of maple sugar, and also of dairy produce (butter and cheese), hardwood, lumber, fruit, manufactures of woollens, and flour mills. Area, 9135 m. Pop 344,000.

Verona, a town of N. Italy, chief town of a province of the same name, on the Adige, 72 m by rail W of Venice; railway workshops, and manufactures of cottons, silks, and woollens, and of musical instruments, tanning, &c., great transit trade by the Brenner Railway for Germany. Area of province, 1188 m. Pop. 422,500, pop of town, 74,500.

Verviers, a town of Belgium, on the Vesdre, 14 m by rail ESE of Liège, with manufactures of woollen yarn, woollens, and woollen weaving and spinning machinery. Pop 52,500.

Viborg, a government of Finland, Russia, lying along the Gulf of Finland and Lake Ladoga; chief town of the same name; iron works, and fishing. Regular communication from Hull. British vice-consul. Area, 13,530 m. Pop 394,500.

Vicenza, the chief town of a province of the same name, in N Italy, 42 m by rail W of Venice, and 20 N.W of Padua; silk weaving, and spinning of silk, wool, cotton, flax, and hemp. Area of province, 1052 m. Pop 447,000, pop of town, 44,500.

**Vichy**, a town of the department of Allier, France, on the Allier, 28 m. N E of Clermont, with alkaline springs, both warm and cold, of great use in troubles of the stomach, liver, and blood; waters bottled and exported in very considerable quantity. Letters, 18 hours, parcels, 1 day 21 hours. Pop 14,500, increasing in the season to probably 50,000

**Vicksburg**, a town of Mississippi, United States, on the Mississippi, 235 m by rail, or 400 by river, N.N.W. of New Orleans, with manufactures of iron ware, machinery, and railway cars, and large exports of cotton and cotton-seed oil Pop 15,000

**Victoria.**—*Surface and Size.*—Victoria is a state of the Australian Commonwealth, in the S E corner of the continent, lying between 34° and 39° S, and between 141° and 150° E, and bounded N and N E by New South Wales (boundary formed by Murray almost from its source for 670 m.), S. by the Pacific and Indian Oceans, and W by South Australia. The extreme length from E to W is 420 m, the greatest width 250 m, the area 87,884 m, and the coast-line about 750 m. At a distance of 60 to 70 m from the coast the whole state is traversed by the Great Dividing Range, the part in the W being known as the Grampians (3827 ft.), and the middle part as the Pyrenees (5000), while the eastern is part of the Australian Alps (6508). Other ranges strike off these so that a considerable portion of the whole area is hilly, the slopes being in most cases heavily timbered. The N.W. has most flat ground. The greater part of the N and N W is drained by the Murray and its tributaries, though in the N W and S there are also districts of inland drainage where the streams end in lakes and marshes often saline. On the coast slope the principal streams are the Glenelg, Hopkins, Yarra Yarra, Latrobe, Mitchell, and Snowy rivers. The climate is, in the main, pleasant and healthy, the temperature ranging from 25° Fahr in July and August to as high sometimes as 110° in the hot winds of January and February. These extremes are, however, seldom of long duration, and the annual mean is 57°, while the rainfall, except in the N W, varies from 20 to 60 in., the latter among the eastern hills. In the N W the amount falls to 10 in. or less.

*Government, &c.*—There is a governor appointed by the Crown for six years, with a representative Legislative Council and Legislative Assembly. Pop 1,201,500, besides 7000 Chinese, and 600 natives. From Melbourne as a centre a network of railways spreads out in all directions, junction with the South Australian system taking place near Wolsley in the W., and with the New South Wales system near Albury, and near Wahgunyah, on the N E. The total mileage is nearly 3300, all belonging to the state.

*Productions and Resources.*—The staple products of the state are wool and gold, which are nearly equal in output value and constitute between them almost half of the total export. Next come cereals and butter. Half of the whole area has excellent soil, and is eminently suited for agricultural operations of different kinds, though part of it requires irrigation. The state is carrying out extensive irrigation works in many of the districts where they are needed—Mildura, Goulburn, Broken River, and elsewhere. The forest area is extensive (probably over 7,000,000 acres), with many valuable timber and other trees—red gum (poles, sleepers, ships' frames, &c.), blue gum, red and white iron bark, box (beams, shingles, wheel spokes and naves, &c.), blackwood and light-wood acacias (railway carriages, cabinet purposes, coach-building, agricultural implements, &c.), beechwood, wattle, and myall. The thinning and felling are now being brought under careful government control. The total area under cultivation is about 4,000,000 acres, of which wheat occupies more than half, and there are large crops of oats; while vines occupy over 30,000 acres, and orchards (growing fruit for sale) 45,000 acres. Wine promises to become an important production; the export of raisins and other dried fruits, and of canned fruits, &c. is steadily growing; fibre plants thrive; and attention is being given to the cultivation of hemp and flax for fibre, and also, along with colza and sun flowers, for oil and oil-cake. Tobacco is also successful, and dairy and agricultural produce are exported to the value of nearly £1,500,000—mainly butter, though the trade in mutton and other things sent out under similar cold storage conditions is steadily growing. Of the total area, 11,500,000 acres are occupied by mallee scrub, and over 18,000,000 acres are under pasture. These afford grazing for some 13,000,000 sheep, 1,900,000 stock cattle, 400,000 milk cattle, and 450,000 horses, and there are 350,000 pigs. The mineral resources are considerable, gold is found over probably one-third of the whole area, and the annual output of the colony itself is about £3,200,000; coal, tin, copper, antimony, silver, and kieselguhr are also found in sufficient quantity to be worked, and ochre, cobalt, and other pigment substances are being developed, as well as pyrites and china-clay. The frozen-meat works now deal with nearly 500,000 sheep, nearly 5 000,000 rabbits, 16,000 cattle, and 44,000 fowls.

*Trade, &c.*—The imports and exports are each valued at about £18,000,000 (£15,500,000 by sea). Of the former over 38 per cent. are sent by the United Kingdom, nearly as much by the other Australasian colonies, 8 by France, and 4 by Germany. The chief imports are cottons, iron and steel, live stock, woollens, sugar and

molasses, timber, coal, tea, silks, oils, apparel and slops, bags and sacks, books, bicycles, drugs and chemicals; earthenware, glass, and china, haberdashery, gloves, hosiery, agricultural implements, paper, provisions, &c. The chief exports are wool (nearly one-fourth, a little less than half transit), gold (nearly one-fourth, 30 per cent transit), grain and flour, butter, live stock, frozen and preserved meat, leather and harness, and tallow, and there is a transit trade in hides and skins, and re-export of tea, apparel and slops, agricultural implements, sugar and molasses, woollens, books, and provisions. The imports into Victoria from the United Kingdom (total value over £5,500,000) cover in larger or smaller quantity almost the whole field of British production, but the chief are cottons, iron, woollens and worsteds, apparel, spirits, machinery, books, paper, linen, painters' colours, oil and floor cloth, chemicals, cycles and carriages, earthen and china ware and glass, drugs and medicines, &c., and there is a transit trade in foreign and colonial merchandise (silks, woollens, &c) valued at over £600,000. The articles sent by Victoria to the United Kingdom (total value £8,000,000) are chiefly wool (nearly half), wheat and butter (each over £1,000,000), unwrought copper and copper ore, fresh mutton, leather, tin, dead rabbits, tallow and stearine, sheep skins, rabbit skins, flour, pig and sheet lead, and wine. The mercantile marine has a tonnage of 104,000; and the tonnage entered and cleared is nearly 6,000,000, besides 900,000 tons of coasting trade. Mails from and to London every week, money orders to and from, for other postal information see Australia and New South Wales.

Victoria Nyanza, the largest of the great fresh water lakes of central Africa, lying along the equator, and with the meridian of 33° E passing very nearly through the centre. The northern part is in British East Africa, and the southern part in German East Africa, extreme length from N to S about 270 m, and extreme width from E to W about 225. The area of water is sufficiently large to cause occasional evening sea-breezes, and morning land-breezes, extreme depth, 620 ft; height of surface above sea-level about 775 ft. Sends off its surplus waters to the Nile. Uganda Railway to Mombasa, in British East Africa, like steamers; and should the Cape to Cairo line be made the route will be by the W and N.W. of the Lake. Lines projected from S end through German East Africa to Talora and Tanga. Area about 32,000 m.

Vienna, the chief town of Austria, at the junction of the Wien and the Danube, 137 m N.W. of Paris, 380 S.S.E. of Berlin, 650 E by S. of Rome, and 992 (rail, &c.) from London, great railway centre, with important river trade in grain and flour, coal, textiles, cattle,

wine, &c., manufactures of machinery, musical and scientific instruments, surgical instruments, leather, bentwood furniture, artistic goods in bronze and pewter, terra cotta, iron ware, jewellery, earthenware, meerschaum pipes, chemicals, beer, &c.; one of the Continental centres of financial business. Letters, 1 day 7 hours; parcels, 4 days. Time for noon at Greenwich, 16 PM. British consul-general. Pop 1,675,000.

Vienne, a department of W. France; wheat, oats, chestnuts, walnuts, almonds; iron smelting and cutlery, iron, manganese, and litho graphic stone. Area, 2691 m. Pop 336,500.

Vienne, a town of the department of Isère, France, on the Rhone, 18 m by rail S of Lyons, with a trade in grain and wine; and manufactures of flannels and other woollens, haircloth, leather, paper, silk, machinery, hardware, glass, &c.; lead, silver, and copper mines, in neighbourhood. Pop 25,000.

Vienne, Haute-, a department of W. France; chestnuts, wheat, colza, graphite, mica, and valuable deposits of china-clay, manufactures of china (Limoges), iron, gloves, and wooden shoes. Area, 2130 m. Pop 382,000.

Viersen, a town of the Rhine province of Prussia, 20 m. by rail N.W. of Dusseldorf, with spinning of flax and cotton, and manufactures of silks, velvets, plush, &c. Pop. 25,000.

Vigo, a port on the N.W. coast of Spain, on a bay of the same name, 45 m S by W. of Santiago, bay 18 m. long, and from 1½ to 5½ wide, with a ship channel nearly 1 m. broad, and 5 to 15 fathoms deep, good anchorage, and quays have a depth of from 20 to 28 ft at low water of spring tides, imports codfish, hides, coal, hardware, woollens, petroleum, sulphur, cottons, &c., exports preserves, eggs, sardines, mineral waters, wine, ergot, &c.; total trade of about £400,000, of which about 30 per cent are British, of 2,300,000 tons entered and cleared over one-fourth are British. Regular communication from London, Liverpool, and Southampton. Distance from London, 810 m, Liverpool, 735, Glasgow, 845; Cardiff, 630. Letters, 3 days. British vice-consul. Pop 25,000.

Virginia, one of the central eastern states of the United States, along the Atlantic, Chesapeake Bay, and Potomac River, surface rising in six steps from the coast to the Alleghenies; coast-line, following windings, some 1500 m, coalfields in the S.W., lead, zinc, and brown hematite iron, ore, and making of pig-iron; oak and pine forests; maize, wheat, and flour, and tobacco, fruits and vegetables, important fisheries and extensive oyster-beds along coast and in river, excellent railway and water communication, the latter especially from the James River. Area, 40,125 m. Pop 1,854,500.

Virginia, West, an east central state of the United States, lying immediately to the N.W.

of that just described; enormous deposits of coal, and also some iron, and there are large manufactures of pig-iron and steel, iron nails, steel nails, and other iron and steel products, petroleum and salt; a large portion of the state covered with timber, and a considerable output of lumber, pasture good, and the production of butter and cheese very considerable. Area, 24,645 m. Pop 959,000

**Vistula**, a large river of central Europe, rising on the borders of Austrian Silesia, and flowing northwards through Russian Poland and Prussia to the Baltic, with a length of about 650 m, of which over 150 are in Prussia, important river trade, the lower and middle parts being the outlet and inlet for trade from and to the old Kingdom of Poland, frozen for three months every year; navigable by small boats for over 600 m, and by barges of fair size for about 500. Area of basin about 73,000 m.

**Vitebsk**, a government of W Russia, with a chief town of the same name, drainage carried off by the Duna, which is connected with the Dnieper by the Beresina Canal, a small export of timber, flax, and linseed, all of which the town sends to Riga, along with some grain, sugar, and hemp. The town, on the Duna, is 380 m by rail S of St Petersburg. Area, 17,440 m. Pop 1,503,000, pop of town, 66,000.

**Vittoria**, a town of N Spain, 30 m S S E of Bilbao, and 120 by rail N E of Valladolid, with manufactures of paper, linen, cabinet work, and pottery. Pop 30,500.

**Vladimir**, a province of centre Russia, large deposits of iron ore and china-clay, and manufactures of cottons, linens, iron, leather, chemicals, glass, flour mills and distilleries, extensive domestic industries (though none on a large scale) throughout the province generally, manufactures of scythes, &c, hardware, wooden vessels, felt goods, earthenware, &c. The town is 120 m by rail N E of Moscow. Area, 18,864 m. Pop 1,571,000, pop of town, 28,500.

**Vladivostok**, an important naval station of Russia, in Siberia, on the Pacific coast, kept open in winter by means of ice-breakers, least depth of water 30 ft, graving docks 300 to 550 ft, and with 26 and 30 ft of water on sill, imports general goods to the value of nearly £500,000, and exports large quantities of edible seaweed to China. Regular communication from London and Middlesborough. Letters, 29 to 35 days. Pop about 29,000.

**Volga**, the largest river of Europe, belonging entirely to European Russia, rising in the Valdai Hills a little to the S of St Petersburg, and having a course, first E and then S, of about 2400 m to the Caspian Sea. Navigable along its whole course, excepting the first 70 m, it has, as its upper waters are within convenient distance of, and separated by flat country from, the other great rivers of Russia, canal communication with the White Sea, the Gulf of

Finland and Baltic, and the Black Sea, as well as important trade communication with the Don, Dniester, Dnieper, Dwina, and other rivers which form part of the waterways to those distant points. The fleet that carries the enormous river trade is said to number somewhere about 20,000 vessels, of which about 1400 are steamers, the whole, including some 40,000 rafts, having a capacity of nearly 18,000,000 tons. The trade is of the utmost importance for the great fair at Nijni-Novgorod. Besides canal communication, railways converging on the system at different points from the westward form valuable lines of communication. During the winter months (last week of November to middle of March) the river is frozen, and traffic is at a standstill, though travellers pass along the ice in sledges. There are important fisheries of sturgeon, pike, and carp, and seals are got in the lower waters close to the Caspian, the fishing on the lower part of the river itself, and along the shores of the Caspian giving employment to, probably, 70,000 people. The chief tributaries, navigable for short distances, are, from the N, the Kama, and from the S, the Oka. Area of basin about 592,000 m.

**Volhynia**, a province of S W Russia, to the E of the Bug, forests, cultivation of beet, tobacco, and grain, sheep-rearing, and manufactures of sugar, woollen cloth, metal ware, and paper. Area, 27,743 m. Pop 2,998,000.

**Volo**, a port of N E Greece, at the head of the Gulf of Volo, with railway communication inland 37 m to Larissa, depth at entrance 5 to 7 fathoms, and vessels discharge by lighters from safe and sheltered anchorage with 5 to 12 fathoms, imports from abroad textiles, coffee, hides, sugar, coal, iron, ropes and sacks, glass and pottery, rice, &c., and exports abroad flour, hides, olive-oil, olives, &c.; and to other parts of Greece, grain, flour, and olive-oil, total trade valued at about £165,000. British consul. Pop 20,000.

**Vologda**, a very large province of N E Russia (stretching over 800 m from near Lake Ladoga to the Urals), with a chief town of the same name, iron works, and salt-winning, large amount of timber, which is cut for the manufacture of potash and tar, making of wooden ware, exports of flax, linseed, timber, tar, butter, furs, and linen. The chief town, in the S W, 300 m by rail N N E of Moscow, has a trade in flax, hemp, linseed, oats, butter, and eggs. Area of province, 155,498 m. Pop 1,366,000, pop of town, 28,000.

**Voronezh**, a province of Russia, with a chief town of the same name, the surface forming part of the Great Plain, 450 to 700 ft., rearing of cattle and horses, market gardens, cultivation of grain, beet, sunflowers, tobacco, &c., manufactures of woollens, sunflower and linseed oil, sugar, and tobacco, distilling. The

chief town, 200 m S E of Moscow, is a railway centre, with a trade in coal from the S Russian basin *via* the Don, grain, wood, sugar, flax, hides, and tallow. Area of province, 25,443 m. Pop 2,546,500, pop of town, 84,500

Vosges, a department of E France, separated from Alsace-Lorraine by the Vosges Mountains, forests cover about 35 per cent of the surface, lignite, iron, lead, copper, cobalt, zinc, manganese, and antimony, growing of vines, plums, and cherries, production of cheese, manufactures of cotton, embroidery, linen, lace, iron works, bleaching and dye works, saw mills, distilling of kirschwasser. Area, 2266 m. Pop 421,500

Vosges, a range of mountains to the W of the middle Rhine, and running parallel with the Black Forest on the W side of the river, reach an extreme height of over 4650 ft., well-wooded, crossed by a railway from Strasburg

by Zabern to Lunéville, and by the Marne and Rhine Canal, and with no other *via* except by mountain roads, for 75 m. southward, where the railway from Mulhausen and the Moselle and Rhine Canal pass over to the upper valley of the Doubs and on to Besançon.

Vyatka, a province of N E Russia, with a chief town of the same name, deposits of iron ore; large extent of forests, cattle rearing, cultivation of flax, rice, and oats; iron works; manufacture of paper, cotton, and chemicals; flour mills; making of wooden goods, and export of linen (home weaving), rice, livestock, flax, hides, and tallow. The chief town is 650 m. E N E of Moscow, and 250 N. E. of Nijni-Novgorod, with a trade in grain, wax and tallow, candles, leather, linen, and animal produce, all of which are sent to Archangel, and to Moscow. Area of province, 59,323 m. Pop. 3,083,000, pop of town, 24,600

## W

Wabash and Erie Canal, a waterway of the United States, 476 m long, from Evansville, Indiana, and the Wabash River to Toledo, Ohio, at Lake Erie

Wakefield, a town of the West Riding of Yorkshire, England, on the Calder, 9 m S of Leeds, with manufactures of woollens and worsteds and hosiery, as well as the making of machinery, agricultural implements, &c. Pop 41,544.

Waldeck, or Waldeck-Pyrmont, a principality of Germany, consisting of Waldeck, between Westphalia and Hesse, and Pyrmont, between Lippe and Brunswick, with timber, iron, gypsum, slate, beet, and export of large quantities of natural mineral waters from Pyrmont. Area, 438 m. Pop 58,000

Wales—*Surface and Size*—A principality of the United Kingdom, projecting from the centre of England, with which country it is united to form the division of England and Wales. It is bounded N by the Irish Sea, W by St. George's Channel, S by the Bristol Channel, and E by the counties of Cheshire, Shropshire, Hereford, and Monmouth. The length, from the mouth of the Dee to the S of Glamorgan, is about 135 m., the breadth varies from 35 to 100 m., and the area is 7467 m. or 4,779,325 acres—exclusive of foreshore and tidal water, but inclusive of lakes, &c., 4,776,779. As the population is, say, 1,721,000, this gives 230 persons to the square mile, but of course the density varies considerably, from over 49 in Radnor to over 1064 in the great industrial county of Glamorgan. Of the total area of the United Kingdom, Wales has about 6 per cent, of the population slightly over 4, of the coal by quantity nearly 15, and by value over 19, of the slate 75, of the limestone 9, and of the igneous rocks and sandstone about 9 each also

The country is divided into North Wales and South Wales, each containing six counties, of which, in the former, Flint (256 m.) is the smallest and Montgomery (797) the largest; and in the latter, the smallest is Radnor (471) and the largest Carmarthen (918). The most important county is Glamorgan (608), which has nearly half of the population. In the N. W. Anglesea forms an island cut off from the mainland by the Menai Strait. The only two large towns are Cardiff (161,420) and Swansea (94,514), both in Glamorgan. The coast-line is broken on the N by the opening of the Dee, and by the mouths of the Clwyd and Conway, the latter on Benumaris Bay at the N. end of the Menai Strait, on the W by the great sweeps of Carnarvon Bay and Cardigan Bay, the latter with Tremadoc Bay in the N and the mouths of the Dovey and Teifi in the centre and S, on the S W by St. Bride Bay and Milford Haven, and on the S by Carmarthen Bay and Swansea Bay. The Dee is shallow, and elsewhere want of convenient communication and absence of coal has, except in the S, prevented development of the natural harbours. The drainage is carried off in the N by the upper waters of the Severn and Dee, by the other rivers already mentioned, and by smaller streams, in the W by the rivers already mentioned and some smaller streams, and in the S by the upper waters of the Wye and Usk, the Taff, the Tawe, and the Towy. Anglesea is low and undulating, and there is also a good deal of low ground in the south-western peninsula (in both cases the greater part of it under 600 ft.), but elsewhere the country is uniformly hilly rising to many tops of from 2000 to over 3000 ft., and reaching in Carnarvonshire an extreme height of 3560 ft.—Snowdon, the highest point of the United

Kingdom outside Scotland The climate does not differ in any marked degree from that of the hillier parts of England, except, perhaps, that the greater proportional amount of high land leads naturally to a greater rainfall.

*Productions and Resources*—Of the total area 12 per cent are uncultivated, nearly 4 under wood, nearly 25 heath, &c, fit for grazing, and 59 under crops and grass The arable ground covers some 880,000 acres, and nearly 1,950,000 acres are under permanent pasture, with grass not broken up in rotation but exclusive of mountain and heath land The crop area has about 45 per cent under rotation grasses, 23 under oats, about 11 under barley, less than 7 under turnips, and about  $3\frac{1}{2}$  under potatoes The horses number nearly 155,000, the cattle 745,000, and the sheep 3,430,000 Of the arable land about 43 per cent are in holdings of from 100 to 300 acres, over 26 between 50 and 100, 22 between 5 and 50, and a little over 6 above 300 The great wealth of Wales lies, however, in minerals and the connected industries, and more especially in coal—over 80 per cent by value of the whole mineral production There are two coalfields, one in the N, in Denbigh and Flint, which turns out about 3,000,000 tons of a total output of over 32,000,000 tons The southern field extends through Glamorgan, Carmarthen, Brecon, and Pembroke, but over 93 per cent of the quantity raised is turned out by Glamorgan (84 per cent of whole Welsh production), and  $4\frac{1}{2}$  by Carmarthen There is also, as already noted, a large production of slate, limestone, fire-clay, &c, and of the bread-winners of the population nearly 153,000 are employed in mines and quarries The total mineral output is valued at about £21,500,000, of which coal has about £19,500,000, and slate about £1,100,000 Igneous rocks, limestone, and sandstone are all well over £120,000 The southern field is particularly rich in anthracite (smokeless steam)—Merthyr, Taff Vale, Aberdare, Rhondda The slate comes mainly from Carnarvon and Merioneth, igneous rock, Carnarvon and Pembroke, limestone, Carnarvon, Glamorgan, Brecon, and Denbigh, sandstone, Glamorgan, fire-clay, Denbigh, Flint, and Glamorgan, and there are small quantities of lead and silver-lead (Flint and Cardigan), zinc (Denbigh, Flint, Cardigan, and Carnarvon), and gold Merioneth Copper, ochre, and iron are also worked, but in small amount There is, on the southern field, extensive smelting of iron, copper, and tin, the ore being brought from practically all parts of the world The iron ore (over 1,000,000 tons, one-sixth of whole quantity for United Kingdom) comes mainly to Cardiff and Swansea, and the quantity of pig-iron produced is about 500,000 tons The copper ore and copper come mainly to Swansea, which receives some 98,000 tons (more than one-third of whole copper

supply of United Kingdom, exclusive of manufactured goods, or if partly wrought material be left out, more than one-half) The tin and tin-plate industry is centred at Swansea, and is still the most extensive in the world (export say 265,000 tons), though the United States is almost up with it, the manufacture there having increased very rapidly in recent years owing to the fostering action of the McKinley tariff There are considerable local manufactures of flannels (Newton, and Montgomery) The mineral districts, especially in the S, have good communication both by rail and canal, the N and S direction of the river valleys affording convenient routes for inland communication See also Holyhead and Milford Haven

**Walfish Bay**, a British possession and port on the W coast of Africa, at 23° S, 420 m N of the mouth of the Orange River, surrounded by German S W Africa, with which it has communication by a railway 12 m. long Area, 430 m Pop 800, about 30 Europeans.

**Wallaroo**, a port of S Australia, outlet of a copper-mining district of the same name, on the E side of Spencer Gulf, 123 m by rail N W of Adelaide, harbour takes vessels of 23 ft draught at jetty at low water of spring tides, smelting works, copper ore being sent to Hunter River, in New South Wales, for smelting, and the ships bringing back return cargoes of coal which is used for smelting at Wallaroo itself; imports coal, timber, and general goods, exports copper ore, copper, wheat, and flour, the copper mines are near Kadina, 6 m from the port Gold, silver, and concentrated ore are also received from Tasmania, New South Wales, Victoria, and Western Australia for treatment Pop 3500

**Wallsend**, a town of Northumberland, England, on the estuary of the Tyne, 3 m N E of Newcastle, once famous for coal, now engaged in aluminium manufacture Pop 20,932

**Walsall**, a town of Staffordshire, England, 8 m N N W of Birmingham, with coal and limestone in neighbourhood, tanning, and manufactures of iron ware, harness, and saddlery Pop 86,440

**Waltham**, or **Waltham Abbey**, a town of Essex, England, on the Lea, 13 m N by E of London, with market gardens, large government gunpowder and cordite works at Enfield, a mile to the S, a government manufactory of small-arms Pop 6547

**Waltham**, a town of Massachusetts, United States, 10 m by rail W by N of Boston, manufactures of watches and cotton Pop 23,500

**Warrington**, a town of Lancashire, England, 18 m by rail E of Liverpool, with important manufactures of pins, wire, files, iron ware, gas-stoves and cooking appliances, heavy leather goods, glass, chemicals, &c. Pop. 64,241.

**Warsaw**, a province of Russian Poland,

with a chief town of the same name; sugar, carpets and other woollens, jute goods, linen, cotton, boots and shoes, and ready-made clothing. The town, on the Vistula, 700 m by rail S W. of St. Petersburg, 330 E of Berlin, and 1142 (rail, &c) from London, has manufactures of silver plate, machinery, chemicals, pianos and other musical instruments, boots and shoes and leather goods, carriages, woollens, and sugar, as well as brewing and distilling. Letters, 4 days. British consul-general. Area, 5623 m. Pop 1,934,000, pop of town, 638,000.

Warwick, a west-midland county of England, with chief town of same name, small coalfield with fire-clay, limestone, and iron stone, orchards, canal communication with Severn, Mersey, Trent, and Thames. The town, on the Avon, 27 m by rail S E of Birmingham, is an agricultural centre, with manufactures of agricultural implements, gelatine, and art furniture. Area of county, 577,462 acres. Pop 897,678, pop of town, 11,889.

Wash, a large opening on the E coast of England, between Lincoln and Norfolk, with a length of 22 m and a width of 15, low shores and very shallow water, the greater part of it being under 5 fathoms, while considerable portions are left dry at low water, receives the rivers Witham, Welland, Nen, and Great Ouse. There are navigable channels, called the Lynn Deep, leading to the mouths of the Nen and Ouse, and the Boston Deep, leading to those of the Witham and Welland.

Washington, the political capital of the United States, in the federal district of Columbia, on the Potomac, 230 m. by rail S W of New York, with White House (the official residence of the president of the United States), and the Capitol (where Congress meets, the Supreme Court sits, and all the Government offices are housed). Letters, 9 days. Pop 278,718.

Washington, the extreme north-western state of the United States, with British Colum-

head of the estuary, which is known as Waterford Harbour, is 97 m by rail S S W. of Dublin, and can be reached at any time by vessels up to 20 ft., and has that depth at quays, vessels of 23 ft or a little over can reach the town at high water of spring tides, imports coal and timber, and exports cattle, grain, agricultural produce, &c. Area of county, 452,912 acres. Pop 87,187, pop of town, 26,769.

Watertown, a town of New York, United States, on Black River, 12 m. up from the E. end of Lake Ontario, with iron and lime in neighbourhood, and manufactures of farm implements, waggons, sewing machines, paper, &c. Pop 22,000.

Watford, a town of Hertfordshire, England, on the Colne, 18 m. by rail N W of London, with watercress fields, making of cocoa and paper, and silk weaving. Pop 29,023.

Wednesbury, a town of Staffordshire, England, 8 m N W of Birmingham, with good railway and canal communication, coal pits and iron works in neighbourhood, large manufacture of wrought iron, bar iron, boiler plate, tubes, edge tools and other steel wares, axles and other fittings for railway carriages and waggons. Pop 26,544.

Wei-hai-wei, a territory in N E. China, on N E coast of Shantung Peninsula, leased in 1898 to Great Britain for so long as Port Arthur is occupied by Russia. It comprises the island of Lau Kung, and all the islands in the Bay of Wei-hai-wei, with a belt of land 10 m wide along the entire coast-line of the Bay. The Bay—the most eastern harbour of the peninsula—is 6 m. long, and 3 to 4 wide, with easy access by two channels—eastern  $2\frac{1}{2}$  m wide, and western two-thirds of a mile across. Lau Kung, lying between them, is 2 m long and three-quarters of a mile wide. Total area about 285 m<sup>2</sup>, and there are military rights over the part of the province E of  $121^{\circ} 40'$ , which has an area of 1505 m<sup>2</sup>. Surface hilly, rising to 1500 ft. Imports (£50,000) meanwhile maize, timber, crockery, sugar, tobacco, piece-goods, yarns, oil, and matches, exports (£12,000) salt fish, and has small trade in raw silk. Gold said to exist. British naval base. Pop 124,000.

Welland Canal, a canal of Canada, connecting Lake Ontario and Lake Erie, with a length of 27 m, 25 locks (270 by 45 ft) with a rise of 327 ft, a bottom width of 100 ft, and a depth of 14 ft.; annual tonnage passing through about 30,000,000, open about 8 months in the year.

Wellingborough, a town of Northamptonshire, England, 11 m by rail E N E of Northampton; iron ore, blast-furnaces, and manufactures of boots and shoes. Pop 18,412.

Wellington, the chief town of New Zealand, on the shore of Port Nicholson, an inlet of Cook's Strait, in the S end of North Island—150 m. from Nelson, 1200 m from Sydney, and 1400 from Melbourne, with all of which there

is regular steamboat communication. The harbour is 6 m. in length and breadth, with an entrance three-quarters of a mile wide at the narrowest part; good anchorage, and sufficient water at quays at low water for vessels drawing from 22 to 23 ft.; imports coal, lumber, and general goods, and, in transit, wool, skins, and hemp; exports frozen and preserved meat, tallow, timber, grain, wool, skins, hemp, butter, cheese, &c.; meat freezing and preserving works; making of tallow, bone-dust, candles, soap, leather, wax matches, boots and shoes, iron ware, raggons, woollen cloth, &c. Railway communication north-eastward to Napier (215 m) on Hawke's Bay, and northward and north-westward along the coast to New Plymouth (238 m.) and Waitara (254) in Taranaki. Regular communication from London, Liverpool, Glasgow. Distance from London, 11,570 m.; Liverpool, 11,795; Glasgow, 11,900; Cardiff, 11,690. Letters, via San Francisco, 31 days; via Suez, 49; parcels, 46 days. Pop. 43,633; pop. including suburbs, 49,344.

Wener, a lake of S.W. Sweden, third largest in Europe, about 20 m. from inlets off the Cattegat with an extreme length of about 95 m., a breadth of about 50, an extreme depth of 295 ft., and surface about 143 ft. above sea-level. Surplus water goes S. to the Cattegat by the Göta and by means of this river, the Trollhättan Canal which passes round the falls of Trollhättan, Lake Wener itself, and the Göta Canal to Lake Wetter and from Lake Wetter to the Baltic, water communication is obtained between the Baltic and the Cattegat; total length of route 205 m., with a depth of 10 ft., and 57 locks to pass through. The Göta River has a course of about 50 m., and the Göta Canal of about 45. Area of the lake about 2400 m.

Wenlock, a town of Shropshire, England, with limestone quarries; manufactures of bricks, tiles, and tobacco pipes at Brosley; iron works and china works at Madeley, Coalbrookdale, and Coalport. Pop. 15,896.

Werden, a town of Saxony, Germany, 45 m. by rail S. of Leipzig; manufactures woollen, worsted, and vicuña, yarn. Pop. 19,500.

Wesel, a town of the Rhine province of Prussia, at the junction of the Lippe and the Rhine, 35 m. by rail N.W. of Düsseldorf, with manufactures of sheet lead and lead pipe, machinery, pianos, art fabrics, pottery, &c. Pop. 22,593.

Weser, a river of N.W. Prussia, flowing to the North Sea; navigable in the lower part for large vessels (see Bremen and Bremerhaven), and for barges of 3 ft. draught much farther up; canal communication with the Elbe, and with the Ems flowing to the Dollart.

West Bromwich, a town of Staffordshire, England, 5 m. by rail W.N.W. of Birmingham, with blast-furnaces, puddling works, rolling

mills for sheet iron, making of sheet glass, iron foundries, and manufacture of all kinds of hardware as in Birmingham. Pop. 65,172.

**Western Australia.**—*Situation and Size, &c.*—Western Australia is one of the states of the Australian Commonwealth, occupying the whole of the continent W. of the line of 129° E., which divides it from South Australia. It is bounded N. and W. by the Indian Ocean, and S. by the Pacific. The greatest length is 1420 m., the width 950 m., the area including adjacent islands, 975,976 m., and the coast-line about 3500 m. There are ridges of mountains near the coast, nowhere, however, reaching more than 3500 ft., and the rest of the surface is flat, or plateau (1000 to 2000 ft.) sloping inland. There are a number of openings round the coast, but most of them are worthless owing to various dangers—scares, bars, &c.—that beset them. The drainage of the coast-plateau is carried off in the N. by the Ord and Fitzroy Rivers, in the N.W. by the De Grey, Yule, Fortescue, and Ashburton; in the W. by the Gascoyne, Wooramel, Murchison, and Swan. Elsewhere there are smaller streams, and the whole of the interior is an area of inland drainage to salt lakes and swamps. The climate of the N. is tropical with a wet season (November to April), a summer mean temperature (November, December, January) of about 90 Fahr., a winter mean of 75°, and a rainfall varying with the locality of from 15 to 35 in. The S. and S.W. have only two seasons, summer and winter, with temperature and rainfall much as in the N. On the coast N. of De Grey River, and S. of Gascoyne River, the rainfall is only 10 in., and it is still less on the inland plateau.

*Government, &c.*—There is a governor appointed by the Crown, a Legislative Council and a Legislative Assembly. There are railways from Perth as a centre N. and S. along the coast, across country to Albany on the S. coast, inland to the Coolgardie gold-fields, and inland from Geraldton to the Murchison gold-field. The total mileage is 1900, of which nearly 1400 belong to the state. There are a number of excellent main roads in the settled districts. Pop. 183,000, exclusive of natives.

*Productions and Resources.*—The whole state is practically one gold-field, the known localities extending from 16° to 33° S., over a length of 1200 m. from N. to S., and a width of more than 100 m., and having an area in the 19 proclaimed gold-fields of 325,513 m., while unexplored regions to the E. will probably be found to contain other great auriferous tracts. The best known fields in the N. are Kimberley (46,886 m.), and Pilbarra (34,880); in the centre Murchison (29,513), and East Murchison (28,242), and in the E. North Coolgardie (30,609), Mount Margaret (42,154), North-East Coolgardie (21,542), Coolgardie and Kalgoorlie (12,605), and Yilgarn (15,593). The great

drawback to many of them is want of water, but tanks and wells have been provided, and a scheme is being carried out which provides for the pumping (through 200 or more miles of steel tubing) of a supply from reservoirs in the south-western coastal ranges to Coolgardie and elsewhere. The annual gold output is valued at nearly £7,000,000. The working of the other minerals—copper, lead, graphite, coal, iron, and tin—is, meanwhile, not great, owing to difficulties connected with cost and transport to market. Antimony, zinc, mica, china-clay, asbestos, and manganese are known to exist, but are not worked, and diamonds are being searched for. The forest (all hardwood) area is estimated at 20,500,000 acres, of which jarra (excellent piles and sleepers—resists teredo), blackbut and red gum cover 8,000,000; the gigantic karri (a kind of eucalyptus) 1,200,000; the tuart, 200,000, the wandoo, 7,000,000, and the York gum, sandal-wood, and jam, 4,000,000, and there are also oaks, wattles, &c. Pine, wattle, and sandal-wood plantations have been formed, and rubber (*ficus elastica*) is being tried. Export of timber is carried on from the extreme S W, the total value being £500,000. The area under crop is only 202,000 acres, but this might be very much extended, as there is a large extent of excellent soil. More than one-third of the arable land is under wheat, over 3000 acres under vines, and over 5000 under orchards. The vines yield excellent wine, and the vine area might be greatly increased. The fruits at present grown are oranges, lemons, apples, pears, quinces, apricots, peaches, plums, nectarines, cherries, figs, almonds, bananas, pomegranates, strawberries, and olives, and mulberries and sericulture are being tried. The olives grow well and produce good oil. The cattle number nearly 350,000, and the sheep 2,500,000. The sheep area is from Kimberley south-westward along the coast, and cattle thrive in both N. and S W. The total pastoral area is, probably, nearly 100,000,000 acres. The export of wool is valued at over £250,000. There is a pearl-shell and pearl fishing at Shark's Bay, and northward of the North West Cape as far as Cambridge Gulf, the export being valued at about £100,000, of which over one-fourth is for pearls. Large beds of edible oysters are found at the same places, and tortoise-shell and guano are got from the coast islands.

Trade, &c.—The imports (total value £6,500,000) are machinery, and the usual general goods and provisions required by such a community. Over £2,500,000 come from the mother country, and over £2,700,000 from other Australian States. The exports (total value £3,500,000) are gold (about 58 per cent.), timber, wool, sandal-wood, pearl-shell, skins and hides, copper and copper ore, and guano. Some 63 per cent. of these

go to the mother country, and rather more than one-fourth (each) to the other Australasian colonies, and to other British possessions, respectively. The articles of British produce sent to Western Australia (total value over £2,500,000) are chiefly iron, machinery, apparel and haberdashery, chemicals, railway carriages and parts thereof, cottons, woollens and worsteds, beer and spirits, leather, &c., and there is a transit trade in foreign and colonial merchandise valued at some £220,000. Exclusive of gold (£3,300,000), the articles sent by Western Australia to the United Kingdom (total value say £1,400,000) are chiefly gold ore (nearly one-third of whole), furniture woods and hard wood (about one-fourth), wool (about one-fourth), silver ore, lead (pig and sheet), shells, skins, copper (regulus and precipitate), copper ore, &c. The mercantile marine has a tonnage of over 12,000, and the tonnage entered and cleared is about 3,800,000. Mails from and to London every week; money orders to and from. For other postal information, *see Australia and New South Wales*.

Westhoughton, a town of Lancashire, England, 5 m S W of Bolton; coal centre, manufactures nails, silk, cotton, &c. Pop 14,377.

Westland, a provincial district of New Zealand, along the centre of the N W. coast of the South Island, between the Southern Alps and the sea, with a length of about 200 m., and an average breadth of about 30 m., and an area of nearly 3,000,000 acres, rich alluvial gold-fields, pine, cedar, and other timber, easily accessible from the sea, excellent grazing land for cattle in different districts, flax of excellent quality, coal, silver-lead, copper, iron, tin. Pop, exclusive of Maories, 14,500.

Westmorland, a county of the N W of England, surface mountainous, reaching an extreme height of over 3100 ft; includes a considerable portion of the famous lake district, coal, lead, slate, gypsum, and barytes; some little manufacture of woollens and paper. Area, 500,906 acres. Pop 64,305.

Westphalia, a province of centre W Prussia, mountainous in S with an extreme height of over 2700 ft., and with hills of 1500 to 1700 ft stretching out to the N., where they slope down into the great North German Plain, drained by the Ems, Weser, Lippe, Ruhr, and smaller streams; about a quarter of the whole area is under forest, a quarter suitable for grazing, and a little over 40 per cent under cultivation, flax and hemp being grown, production of well-known hams, important deposits of coal and iron in the Ruhr coalfield, and of iron in the Schiefergebirge, and zinc, copper, lead, salt, sulphur, and antimony are also worked, manufactures of iron and steel, brass, bronze, Britannia metal, wire, needles, &c., all over the W., as well as making of pottery, and weaving of cotton, in the N E. important linen manu-

factures and bleach works, glass-making, and paper works Area, 7803 m Pop 3,188,000

**Westport**, a port on the S W. coast of the provincial district of Nelson, New Zealand, at the mouth of the Buller River, said to have the best harbour of the South Island, the entrance being easy and the water on the bar always sufficient in depth, while the roadstead is sheltered by Cape Foulwind, 7 m to the W. The town is about 145 m S W. of Nelson, and about 40 m N E of Greymouth, and is the distributing centre for a large gold-field area, as well as for the coalfields of Mount Rochfort to the N W Pop 3000

**Wetter**, a large lake of S W Sweden, 23 m S E of Lake Wener, with a length of about 78 m, a width of 15, an extreme depth of about 370 ft, and a surface about 290 ft. above sea-level, surplus water passes to the Baltic by the Motala River For canal communication, see Wener Area about 750 m

**Wexford**, a county of Leinster, S E Ireland, on St George's Channel, with a chief town of the same name, excellent grazing and large export of agricultural produce—butter, pigs, cattle, poultry, eggs, valuable fisheries along the coast The chief town, on the estuary of the Slaney (which is known as Wexford Harbour), is 68 m in a direct line, and 93 by rail, S by W of Dublin The harbour is obstructed by a bar, and only at very high spring tides can vessels of over 11 ft. enter, but large vessels lie at anchor at Rosslare, distant 9 m by rail, where there is a pier and breakwater, with a depth of 20 ft at low water, and 26 at high water, of stream tides, imports coal, timber, and general goods, exports agricultural produce Area of county, 573,323 acres Pop 104,104, pop of town, 11,168

**Weymouth**, a port of Dorsetshire, England, 8 m S of Dorchester, on a bay between St Alban's Head and the Isle of Portland, harbour with a depth of 12 ft at low water, and 18 at high water, of spring tides, exports Portland stone and cement, and has a regular line of steamers running daily to the Channel Islands Pop 19,831

**Wheeling**, a town of West Virginia, United States, on the Ohio, 92 m up from Pittsburg, and 67 by rail S W of that city, large deposits of coal in neighbourhood, iron smelting, and manufactures of sheet iron, rails, and tin-plate, making of nails, paper, glass and earthenware, machinery, and flour, woollens Pop 38,878

**Whitby**, a port of the North Riding of Yorkshire, at mouth of Esk, 54 m by rail N E of York, harbour with depth of from 10 to 15 ft at high water, veins of jet in neighbourhood in alum shales, largely used for the manufacture of ornaments, fisheries. Pop 11,784

**Whitefield**, a town of Lancashire, England, 5 m. N of Manchester, with coal in neighbourhood and manufactures of cotton Pop 6588

**Whitehaven**, a port of Cumberland, England, near the entrance to the Solway Firth, 38 m S W. of Carlisle, large deposits of coal and iron, with iron smelting, shipbuilding, iron and brass foundries, manufactures of sail-cloth, coarse linen, cordage, and earthenware, dock has a depth at entrance of 20 ft. at high water of spring tides, and 14 at high water of neaps, with 16 at quays at high water of spring tides, imports timber, grain, and general goods, and exports coal, iron ore, pig-iron, steel rails, and stone Distance to Liverpool, 73 m Pop 19,325

**White Sea**, an inlet from the Arctic Ocean, in N Russia, about 100 m. wide at the entrance, narrowing to about 20 further in, and thereafter again spreading out into gulfs, of which one (to the S) receives the River Dwina, another passing S and S E receives the River Onega, and a third passes N W. From the top of the last the distance in a straight line south-eastward to the mouth of the Dwina is about 300 m. From the entrance to the top of the sea on the S W is about 380 m. There is an extreme depth of about 100 fathoms, but over a very considerable portion the depth is from 20 to 50 fathoms Large herring and other fisheries The sea is frozen from the beginning of September till the end of May, and even at other times navigation is interrupted by floating ice Water communication by the Dwina and canals with the Black Sea and Caspian Sea and the Dnieper and Volga Area about 40,000 m.

**Whitstable**, a town of Kent, England, at the junction of the Swale and Thames, 6 m N N W. of Canterbury, with oyster beds Pop 7086

**Wick**, a port of Caithness, Scotland, on a bay of the same name, 161 m by rail N N E. of Inverness, harbour has a depth of about 8 ft at low water of spring tides, and is being deepened so as to have 18 ft. at high water of spring tides, and 15 to 16 at high water of neaps, imports timber, and salt; exports grain, wool, fish, &c, herring and other fisheries, boat building, place of call for steamers from Aberdeen and Leith to Orkney and Shetland Islands Distance to Leith, 185 m Pop 7911

**Wicklow**, a county of Leinster, Ireland, with a chief town of the same name, lying along the E coast between Dublin and Wexford, with good sheep pasture, manufacture of cordite, and oyster beds at Arklow in the extreme S E The chief town, near the centre of the E coast, 28 m by rail E S E of Dublin, has a small harbour, exports the products of the county, and imports general goods Area, 499,958 acres Pop 60,824, pop of town, 3288

**Widnes**, a town of Lancashire, England, at the head of the Mersey, 13 m by rail S E of Liverpool, and with communication with the St. Helen's coalfield by the Sankey Canal; manufactures of chemicals, soap, candles, and

artificial manures; iron founding, and copper smelting Pop. 28,580

Wieliczka, a town of Galicia, Austria-Hungary, 10 m by rail S E of Cracow, with enormous salt mines, which have an output of some 50,000 tons a year. Pop 6500

Wigan, a town of Lancashire, England, 15 m by rail S by E. of Preston, with water communication by the Leeds and Liverpool Canal, large deposits of coal in neighbourhood, with iron works, and extensive manufactures of cottons (calicoes, ginghams, fustians, table-cloths, &c.), making of machinery, paper, linen, &c. Pop 60,770.

Wigtown, a coast county of S W Scotland, with a chief town of the same name; lying along the Irish Sea and the North Channel, with a coast-line of about 120 m, coast broken by Loch Ryan and Luce Bay; live stock and dairy produce; small manufacture of woollens. The county town, 7 m by rail S of Newton Stewart, does not call for notice Area of county, 311,609 acres Pop. 32,685, pop. of town, 1329.

Wilcannia, a town of New South Wales, Australia, on the Darling River, 583 m. W.N.W. of Sydney, with rich opal fields, and copper, silver, and tin, in the surrounding country, sheep grazing, and wool scouring, &c Pop 1000

Wilkesbarre, a town of Pennsylvania, United States, on the Susquehanna, with extensive deposits of coal in neighbourhood, foundries and manufactures of wire-rope, iron ware, locomotives, railway carriages, axles and fittings, mining machinery and tools, &c Pop 52,000.

Williamstown, a port of Victoria, Australia, on the S W side of Hobson's Bay, on the S. point of the estuary of the Yarra Yarra, opposite Port Melbourne, and  $9\frac{1}{2}$  m by rail S W of Melbourne, graving dock which takes vessels of the largest size, freezing works, and meat-pressing, making of woollens, glass, agricultural implements, &c., tradethat of Melbourne. Pop. 14,000

Wilmington, a port of Delaware, United States, on the Delaware River, 25 m by rail W. of Philadelphia, with shipbuilding, and manufactures of steam engines, boilers, bridges, and other iron and steel goods, building of railway carriages, and making of cotton and woollen cloth, leather, flour, powder, matches, &c., saw mills, channel permits vessels up to 21 ft to reach the town at high water; imports hides, skins, china-clay, machinery, and general goods, exports cars and carriages, morocco and patent leather, machinery, matches, flour, Indian corn, &c. Pop 76,500

Wilmington, a port of North Carolina, United States, on Cape Fear River 30 m from the mouth, with manufactures of turpentine, cotton flour and rice flour, &c., depth of water at low-t 16 ft from the mouth of the river up to the town, and from 12 to 20 ft. alongside the quays, with a tidal rise of over 4 ft at the mouth of the river, and nearly 2 at Wilming-

ton, docks with 20 ft. of water, and operations are going on to secure this depth at low water at the quays, and all the way to the sea; imports salt, kainite, and hardware; and exports lumber, cotton, turpentine, resin, rice, tar, &c. British vice-consul. Pop 21,000

Wilton, a town of Wiltshire, England, 3 m. W.N.W. of Salisbury, with manufactures of Wilton and Axminster carpets Pop 2208

Wiltshire, an inland county of S England, in the upper part of the basin of the Thames; sheep pasture, dairy farming, bacon curing (Colne), iron ore, manufactures of broadcloth, and carpets Area, 880,248 acres Pop 273,845

Windward Islands, the southern group of the West India Islands, including St. Lucia, St. Vincent, Barbados, the Grenadines, and Grenada, all belonging to Great Britain; for the name see Leeward Islands; for description of products see separate articles.

Winnipeg, the chief town of the province of Manitoba, Canada, at the junction of the Assiniboine and the Red River, 1424 m by rail W N.W. of Montreal, and 512 N.N.W. of Minneapolis, important wheat centre, great grain elevators and flour mills, the chief workshops of the Canadian Pacific Railway between Montreal and the Pacific, with a yard containing some 40 m of sidings, great centre of trade both by rail and river The Lake of the same name, 40 m N N W, has a length of 280 m, and a breadth of 57, receives the Saskatchewan, Winnipeg, and Red River, from the N., and sends off its surplus waters to Hudson Bay by the Nelson River. Letters, 13 days, parcels, 16 Pop of town, 42,500

Winterthur, a town of Zurich, Switzerland, 17 m. by rail N E of the town of Zurich, with wine-making, and manufactures of cottons, silks, woollens, and locomotives and other machinery. Pop 23,000

Wisconsin, one of the northern states of the United States, lying between the upper end of Lake Superior and the W shore of Lake Michigan, with a coast-line of about 100 m on Lake Superior, and about 200 on Lake Michigan, iron and copper in N, and in S W lead and zinc, forests of white pine and oak cover nearly half the state, large amount of grain produced, and flour milling is an industry of importance; cattle-rearing and dairy-farming, dairy produce, cheese, meat-packing, lumber; pig-iron, manufactures of iron and steel, leather making, and brewing Area, 54,450 m Pop 2,069,000

Wishaw, a town of Lanarkshire, Scotland, 15 m by rail E S E of Glasgow, with coal in neighbourhood, iron smelting, and iron and steel works Pop 20,873

Wismar, a port of Mecklenburg-Schwerin, Germany, on the Baltic, 20 m by rail N of Schwerin, depth of water at entrance variable according to winds, but there is always sufficient depth for vessels of 17 ft, imports coal,

timber, iron, wood-pulp, &c.: exports wheat, rye, linseed, sugar, molasses, kainite, and salt. Distance to London, 820 m.: Hull, 725; Leith, 720 British vice-consul. Pop. 20,500

Witney, a town of Oxfordshire, England, 14 m. by rail W. by N. of Oxford, famous for the manufacture of blankets, and with glove-making. Pop. 3574.

Wittenberg, a town of Saxony, Prussia, on the Elbe, 59 m. S.W. of Berlin; small manufactures of woollens and linens, &c. Pop. 18,500

Wolf Rock, a rock 10 m. S.S.W. of Lands End, England; lighthouse 135 ft. high, with light visible 16 m.

Wollongong, a port of New South Wales, 49 m. S. of Sydney, the chief harbour on the S. part of the coast, and with regular steamer communication with Sydney; harbour has a depth of 18 ft.; centre of coal district (with very thick seams in the field), with fire-clay and iron; dairy farming, a large amount of fresh milk being sent every day to Sydney, and also large supplies of pigs, poultry, eggs, calves, cheese, and bacon, export of coal, and to some extent also of dairy produce, imports general goods. Pop. 4000.

Wolverhampton, a town of Staffordshire, England; great railway and canal centre, 12 m. N.W. of Birmingham; coal and iron all round, with iron smelting and iron works, foundries, Chubb and other locks (a special trade), tin-plate, japanned goods, pipes, electro-plate, enamelled ware, edge tools, &c. Pop. 94,179

Wolverton, a town of Buckingham, England, 9 m. E.N.E. of Buckingham; works of the London and North-Western Railway. Pop. 4500

Woolwich, a port of Kent, England, on the Thames, 9 m. below London Bridge: large government arsenal, with the making of guns and gun carriages, torpedoes, saddlery, cartridges, bullets, rockets, shot and shell and their appurtenances; head-quarters of Royal Artillery and Royal Engineers; Royal Military Academy where officers destined for the artillery and engineer services are trained. Pop. 117,165.

Woonsocket, a town of Rhode Island, United States: manufactures of cottons, woollens, india-rubber goods, iron, &c. Pop. 28,500.

Worcester, an inland county of west-centre England with a town of the same name; coal (in the N.W.), iron, salt, and limestone; market gardens, orchards (plums, pears, apples—cider and perry), hops, &c.; manufactures of iron and steel ware (chains, nails, needles, edge tools, fish hooks &c.), salt, china, carpets, aluminium, fire-clay, glass, gloves, &c. The town, on the Severn, 27½ m. by rail S.W. of Birmingham, has nurseries and market and hop gardens in neighbourhood, and manufactures of china, gloves, vinegar, Worcester sauce, railway signals, chemicals, &c. Area of county, 480,560 acres. Pop. 488,401; pop. of town, 46,623

Worcester, a town of Massachusetts, United

States, 44 m. by rail W.S.W. of Boston; railway centre, with important manufactures of wire, boots and shoes, metal goods, machinery, carpets and other woollens and worsteds, musical instruments, &c. Pop. 118,500.

Workington, a port of Cumberland, England, at the mouth of the Derwent, 7 m. by rail N. of Whitehaven; large deposits of coal in neighbourhood, large iron and steel works, &c.; dock has a depth on sill at springs of 18½ ft., and at neaps of 11½, but the tidal harbour has a depth at entrance at low water of only 2 ft., and at high water of spring tides of 27; imports timber, grain, iron ore, and general goods: exports coal, pig-iron, rails, &c. Pop. 26,141.

Worksop, a town of Nottingham, England, 23 m. N. of Nottingham, with water communication by the Chesterfield Canal; making of chemicals and agricultural implements, preparation of railway sleepers, &c. Pop. 16,112.

Worms, a town of Hesse-Darmstadt, Germany, on the Rhine, 25 m. by rail S.W. of Darmstadt; making of the well-known Liebfrauenmilch wine, an important river trade, and manufactures of artificial wool, bone dust tobacco, patent leather, furniture, printing and other machinery, &c. Pop. 71,000.

Wrexham, a town of Denbigh, Wales, 12 m. S.S.W. of Chester, with coal and lead in neighbourhood, iron and steel works, tanning, brewing, &c. Pop. 14,966.

Wuchow, a port of Kwang-si, China, on the Si-kiang, or West River, 150 m. up from Canton, at the head of the free water communication with the sea; total trade over £1,000,000, of which four-fifths are imports; chief imports cottons and cotton yarn (last mostly Indian), iron and steel and tin, woollens, kerosene (America and Sumatra), matches (Japan), cattle-fish, salt fish, tobacco, raw cotton, silks, vermicelli, sugar, pepper, flour, medicines, &c.; exports hides, aniseed star and oil, wood oil, leather, raw silk, poultry, melon seeds, liquid indigo, moxa, &c. Of over 200,000 tons entered and cleared more than half are British. British consul. Pop. 52,000.

Wuhu a treaty port of the province of Nshanwei, China, on the Yang-tse-kiang 236 m. up from Shanghai, with a number of canals branching out from it to important trading districts (tea, silk, &c.); coalfields in neighbourhood, which are now being opened up, trade in timber, silk, preservation of egg yoke and albumen: works for hulling rice, flour mills, and manufactures of famous red cord, cutlery, and steel ware: imports opium, cotton goods, kerosene, woollens, gunnies, metals, matches, sugar, sandal-wood, &c.; exports rice, rape-seed, raw silk, hemp, wheat, sesame, ground-nuts, beans, feathers, &c. Of over 4,000,000 tons entered and cleared one-half is British. British consul. Pop. 92,500.

Württemberg, a kingdom in the S of the German Empire, hemmed in (except for 16 m. in the S. where it abuts on Lake Constance) between Bavaria to the E. and Baden to the W. The surface is mostly mountainous or plateau, sloping from 3800 on the W. to 500 ft in the N. The drainage of the S E is carried off by the Schussen flowing to Lake Constance, and by the Danube and its tributaries, and of the rest of the country by the Neckar and its tributaries. The climate is moderate for the position, the mean temperature in the lower districts being about 48° Fahr. The government is a hereditary constitutional monarchy, with an Upper Chamber and a House of Deputies. The area is 7503 m., and the pop 2,169,500, of whom about half are dependent on agriculture, cattle-rearing, &c., and one-third on industries of various kinds. The railway mileage is nearly 1200, of which almost the whole belongs to the state, and it is proposed to canalise the Neckar. Of the total area 31 per cent. are under forest (pines, firs, and beech), and 64 per cent under cultivation, one-third part of the latter proportion being grass-land and meadows, so that stock-rearing (cattle—1,000,000—sheep, horses, and pigs) is very important. Some 90 per cent of the holdings are under 30 acres. There is a small production of wine, a considerable production of beer (hops being grown) and vinegar, and cultivation of tobacco and hemp. Iron and salt are mined, and there is export of timber from the Black Forest down the Rhine to Holland. The chief industries are the spinning, weaving, and dyeing, of cottons, woollens, and linens, silks, printing (Stuttgart being the principal centre of publishing in S Germany), the making of corsets, lace, wooden goods (carved work, toys, clock cases, &c.), jewellery, machinery, china pipe-bowls, iron and metal ware, and mathematical, scientific, and musical instruments (organs, pianos, musical boxes, &c.) Export of cattle,

grain, and salt, and a considerable transit trade.

Würzburg, a town of Bavaria, Germany, on the Main, 70 m. by rail S E of Frankfurt; wine and fruit centre, with important river trade in coal, timber, fruit, wine, &c; manufactures of tobacco and cigars, furniture, printing presses and other machinery, railway carriages, mathematical and surgical instruments, iron ware, lamps, vinegar, playing cards, &c. Pop 75,500

Wycombe, a town of Buckingham, England, 34 m by rail W N.W of London, with a considerable amount of beech grown in neighbourhood, and manufactures of beech and other wooden chairs, furniture, lace and straw-plait; paper mills in district. Pop. 15,532

Wye, a large tributary of the Severn, flowing partly through Wales, and partly through England, with a course of about 150 m, navigable for large vessels 2 m up to Chepstow, where the tide sometimes rises 46 ft above low water mark. Barges can go up 70 m as far as Hereford

Wynaad, a tableland of the Western Ghauts, India, with coffee plantations, and gold-bearing quartz rock. It was, about 1874-85, expected that the working of the latter would produce good results, but unfortunately the returns failed to come up to expectation

Wynberg, a town on the eastern side of Table Mountain, 8 m by rail S by E. of Cape Town, important fruit district, wine-making and export of fruit. Pop 5000

Wyoming, one of the N W centre states of the United States. The surface on either side of the Rocky Mountains (main range, 12,200 to 13,800 ft) forms plateaux of from 7000 to 8000 ft. above sea-level, pine forests among the hills, coal, gold, silver, copper, iron, tin, soda, limestone, salt, and petroleum, excellent grazing land with large numbers of cattle and sheep. Area, 97,575 m. Pop. 93,000.

## Y

Yang-tse-kiang, one of the largest rivers in the world, forming a great transit and commercial route in the S E of the Chinese Empire, rising in the mountains of Tibet, and flowing south-eastward, with a course of about 3200 m to the sea at Shanghai, navigable for about two-thirds of its length, though the current is in many places strong, and the rapids in the numerous gorges render passage somewhat difficult, vessels drawing 16 ft of water are able, between April and October when the river is in flood, to ascend for nearly 700 m., and smaller vessels even higher. About 50 m below Nanking it opens out into a wide estuary. Area of basin, 700,000 m

Yarkand, the chief town of eastern Turkestan,

on a river of the same name, about 100 m S E of Kashgar, important trading centre; wool and cashmere, goats' hair, jade and other minerals in neighbourhood. Pop 50,000.

Yarmouth, a port of Norfolk, England, on the River Yare 2½ m up, 20½ m by rail E of Norwich, and 122 N E of London, boat-building, and manufactures of iron ware, sails, silk, &c., great centre of herring and North Sea deep fishing, the cured herring known as bloaters having a wide-spread reputation, depth on bar 12 ft at low water, and 18 at high water, of ordinary spring tides, imports sawn timber, oil-seed cake, wheat, oats, &c, exports cured herring. Yarmouth Roads is a large anchorage off the port, protected by

canton, at N E end of Lake Zug, 24 m by rail from Zurich, has making of enamel, and some manufacture of metal articles and cotton yarn. Area, 92 m. Pop 25,500, pop. of town, 5500.

Zuider Zee, a great inlet in the N E of the Netherlands, with the islands of Texel, Vlieland, Terschelling, and Ameland across its N end, 85 m in length from N. to S, 45 m. wide, and with an area of about 2000 m, the depth is only from 10 to 16 ft except along ship channels, and it has been proposed that a large portion (some 450,000 acres) of the basin should be drained by the Netherlands government at a cost of more than £30,000,000, the works being spread over a period of 30 years.

Zululand, a north-eastern portion of Natal, with the Transvaal to the W, and the little state of Amatongaland to the N. Coal beds 25 m inland from St Lucia Bay, and gold in various parts of the district, although this is not as yet worked to any great extent. At the Umhlatusi Lagoon 36 m S of the St. Lucia River, and about 44 N of the Tugela, it will be possible, at the cost of probably little over £1,000,000, to form an excellent harbour with an area of over 10,000 acres, and with a ship channel having 15 ft at low water. A railway from this inland to Johannesburg and the Rand would be at least as short as that from Delagoa Bay, would pass through British territory all the way, and would keep trade at a British port. The area of Zululand is 10,456 m or over 6,700,000 acres, of which only about 114,000 are cultivated. Pop

202,000, of whom 1500 are whites. Amatongaland has an area of about 5300 m, and a pop. of about 40,000.

Zurich, a canton of N.E. Switzerland; valleys fertile, climate good; cattle-grazing, hemp, and grapes for wine. The wealth of the people, however, lies in their weaving and spinning industries, cottons and silk being about equally made, and there are also manufactures of machinery, chemicals, paper, printers' type, bells, &c. Zurich, the chief town of the canton, stands on the Limmat, where it issues from the Lake of Zurich, 41 m by rail N N E of Lucerne, and is the great centre of the industries already noted as those of the canton. Letters, 1 day; parcels, 1½. British consul-general. Area of canton, 666 m. Pop 431,500, pop. of town, 153,000.

Zutphen, a town of Guelderland, Holland, on the Yssel, 18 m by rail N N E of Arnhem with tanning, paper making, oil works, &c. Pop 17,000.

Zwickau, a town of Saxony, Germany, on the Mulde, 82 m by rail S W of Dresden; centre of an important coal-mining district, with iron smelting, and manufactures of machinery, chemicals, woollens, paper, mirrors, hosiery, &c. Pop 56,000.

Zwolle, a town of Overijssel, Holland, 50 m by rail E by N of Amsterdam; important railway and general transit centre, with ship-building, manufactures of cotton and iron ware, and an important trade in cattle. Pop 31,000.

THE END



Dusseldorf, a town in Prussia, Germany, on right bank of the Rhine, 23 m N N W of Cologne, river port for manufactures of Barmen and Elberfeld Iron, cotton yarn and cloth, woollen yarn, pianos, chemicals, paper, glass, educational centre British consul. Pop. 214,000

Dwina, or Northern Dwina, a river of N

Russia, with a course of 750 m to the White Sea, and a basin of 134,000 m Navigable for only about half the year on account of ice, it is, nevertheless, an important commercial channel, and carries to Archangel every year nearly 4,000,000 tons of goods—grain, flax, hemp, timber, and tar—with return traffic of over half that amount.

## E

Easdale, a small island (area about  $1\frac{1}{2}$  m) of Argyllshire, Scotland, in Firth of Lorne, 16 m S W of Oban, and 107 from Glasgow, *via* Crinan Canal, or 180 *via* Mull of Kintyre, with large slate quarries turning out some 10,000,000 slates annually Pop 284

East London, a port on the S E coast of Cape Colony, South Africa, at the mouth of the Buffalo River, 700 m by rail, and 543 by sea, E of Cape Town, 36 by rail S E of King William's Town, 401 S of Bloemfontein, 253 by sea from Durban Depth on bar, 19 ft. at low water of ordinary spring tides, with a rise of about  $5\frac{1}{2}$  ft., and vessels drawing 20 ft. can lie alongside the wharves; total tonnage, entered and cleared, over 3,000,000 every year Imports general goods, and exports wool, mohair, feathers, gold, hides, &c Regular communication from London and Southampton Distance from London, 6739 m, Southampton, 6573, Cape Town (sea), 543 Pop 13,000

Easton, a town of Pennsylvania, 67 m. by rail N of Philadelphia, railway centre, and meeting-point of Delaware and Lehigh Rivers, and of Delaware, Lehigh, and Morris Canals, with transport trade and iron manufactures Pop 25,500

Ebbw Vale, an urban district in N W Monmouthshire, England, 21 m by rail N. N W. of Newport, with coal pits and large iron works Pop 20,993

Eberswalde, a town in Brandenburg, Prussia, Germany, 28 m by rail N E of Berlin, on Finow Canal, with experimental forestry station and school of forestry; manufactures of nails, felt, &c Pop 22,000

Ebro, a river of N E Spain, with a course of 450 m. to the Mediterranean, and a basin of 38,000 m, navigable for deep-sea vessels by means of ship canal for 20 m up to Tortosa, farther up trade is carried on by means of the Imperial Canal on S side, 60 m long and 10 ft deep This and the Tauste Canal on the N side (25 m)—the latter entirely—are also used for irrigation

Ecuador —*Situation and Size*—Ecuador is a republic in the N W of South America, lying between  $13^{\circ}$  N and  $4\frac{1}{2}^{\circ}$  S, and between  $69\frac{1}{2}^{\circ}$  and  $81^{\circ}$  W, and is bounded N. by Colombia,

E by Brazil, S by Peru, and W by the Pacific Ocean, along which it has a coast line of about 600 m The surface consists of a low-lying coast region stretching inland to the foot-hills of the Cordillera, the hill country along the Andes themselves, with plateaux 9000 ft. above sea-level, and the enormous woodland Provincia del Oriente, on the slope from the Andes eastward by the head-waters of the Amazon More than the half of this last district is claimed by Peru, while Colombia also lays claim to the whole district N E of the Napo The boundaries given above are those claimed by Ecuador itself Many of the peaks of the Andes in Ecuador are active volcanoes, and the principal summits range from 15,700 to 21,500 ft. The drainage to the E. of the Andes is carried to the Amazon, on the W are the rivers Daule, Vinces, Guayas or Guayaquil, &c. The climate of the lowlands is of course intensely tropical, the mean temperature being over  $82^{\circ}$  Fahr, but in the highlands there is an equable perpetual spring, one day being practically like another, even to the extent of their being a regular evening storm at Quito five days, on an average, out of every six The E has heavy rain all the year round (hence the dense vegetation) owing to the warm moisture-laden winds blowing across the Amazon plains till they meet the Cordillera, but in the mountain plateaux and W there is a hot rainy season from December to May, March being the wettest and July the coolest month of the year The total area of the organised districts is 53,871 m, and the total area of the country with the territory claimed about 273,000 m, or as counter-claimed about 116,000 To Ecuador also belong the Galapagos Islands, 730 m off the coast to the W., which add an additional area of 2900 m The greatest length of the country, as claimed by itself, from N to S is about 430 m, and the greatest breadth from E to W about 800 m.

*Government, &c*—The president, chosen by direct popular vote, holds office for four years, and there is a Congress of two Houses. The population of the organised part is nearly 1,205,000, exclusive of about 400 in the Galapagos Islands, and 200,000 uncivilised Indians

and as well warranted as the expectation of earthquakes. Cocoa is at present the staple produce, and coffee, sugar, and the planting of rubber trees are now being also attended to. The industries are of but little importance; the manufacture of straw hats (made from agave fibre) and of woollens being perhaps the most noteworthy. The chief exports are cocoa, ivory, nuts, rubber, silver, straw hats, sugar, coffee, gold, and of the whole a little over one-third goes to France, one-fifth to the United States, one-sixth to Germany, and over one-seventh to Great Britain. The chief imports are cotton and woollen manufactures, machinery, iron work, wood, oil, and food stuffs, and of the whole nearly one-third comes from Great Britain, one-quarter from the United States, one-fifth from Germany, and less than one-tenth from France. The foreign trade of the country (imports and exports) is, however, not large—only a little over 100,000 tons, valued at nearly £1,600,000. Of this the value of imports from the United Kingdom—mainly cottons, woollens, iron, and empty sacks—is on

Water of Leith, and Almond, all flowing to the Firth of Forth, and by the Gala running to the Tweed. Coal, iron, oil shale, fire-clay, and sandstone; market gardens; important production of paper. Area of county, 231,339 acres. Pop. 189,796, pop. of city, 316,837.

**Egypt—Surface and Size.**—Egypt is a country in the N E of Africa, extending from the Mediterranean in the N (about  $31^{\circ} 37' N$ ) up the Nile basin to Wady Halfa ( $22^{\circ} N$ ) in the S—a distance from N to S of about 680 m. The western boundary towards the Libyan Desert and the Soudan is indefinite, while on the E, the country extends to the Red Sea, and on the S is bounded by the Anglo-Egyptian Soudan. The Nile, the only river, and the source of all the prosperity of the country, enters Egypt at Wady Halfa, and after a course of about 600 m separates below Cairo into two streams which enclose between them the great delta (this and the country beyond on both sides forming Lower Egypt) and reach the Mediterranean at Damietta on the E and Rosetta on the W, more than 100 m apart.

The surface in Lower Egypt and along the margin of the river in Upper Egypt is flat, but on both sides of the river are ranges running parallel to its course and separating it from the desert on either hand. Each of these forms what may be roughly described as an undulating plateau, that to the W. ranging from 400 to 700 ft., and that to the E. from 1500 to 2000 with higher peaks and ridges rising to from 5000 to nearly 7000 ft. The climate is very dry (almost rainless indeed), and warm—the dryness, heat, and healthiness, increasing as one goes inland. In winter in Lower Egypt (December to March) the temperature ranges from 50° to 60° Fahr., with cool, damp, northerly winds, and in summer from 85° to 90° Fahr., with (especially in May and June) hot sand-laden winds from the E. and S. In Upper Egypt it is hotter and drier all the year round, the temperature rising at times to 110° and even to 140°. The area is about 400,000 m., of which the delta covers 8500 m., and the delta and Nile valley together about 13,000 m.

*Government, &c.*—Egypt is governed by a hereditary Khedive, nominally suzerain to the Sultan of Turkey, to whom he pays a tribute of £720,000, but with very large independent rights, including those of concluding commercial treaties with foreign powers and of maintaining armed forces. Since 1883, however, the country has been under British influence, the British agent and financial adviser exercising complete financial and very extensive political powers, while the Sirdar, or Commander-in-Chief, and all the higher officers belong to the British army, and there is a British army of occupation of some 6000 men. The present Legislative Council and General Assembly are merely advisory bodies, except in regard to new personal and land taxation, over which they have a right of veto. The population of the settled area is nearly 10,000,000, of whom about 600,000 are nomadic and 113,000 are foreigners. Of these last about 38,000 are Greeks, 24,500 Italians, 20,000 British, 14,000 French, 7000 Austro-Hungarians, and 1300 Germans.

*Communications*—The Nile is the great natural thoroughfare for trade and traffic, but there are in Egypt proper, exclusive of the Soudan line, over 2000 m. of railway (largely owned by Government), and extensions are being made at no very slow rate. Of the total about 800 m. are light railways for agricultural and trade purposes. The main line is from Alexandria by Cairo to Shellal above Assuan at the First Cataract, from which there is a break to Wady Halfa, where the Soudan military railway to Khartoum begins. Other lines of importance are those from Damietta to Cairo, from Cairo by Zagazig to Ismailia, and from Port Said by Ismailia to Suez. The Suez Canal is separately noticed.

*Resources, &c.*—The chief industry (63 per cent. of the population) is agriculture, the ground being fertilised by the alluvium deposited by the annual Nile inundation (*see* Nile), and by an extensive and systematic system of irrigation. In Lower Egypt, where there is a network of irrigation canals, and in all other districts where constant irrigation is possible, two or three crops can be obtained every year, and there are three regular annual crop seasons. Cotton, sugar, and rice are grown in summer (March to October), rice, dhurma, and vegetables in autumn (July to October), and wheat, barley, and other cereals in winter. Of the total area of the delta and Nile valley about three-fifths, or 6,000,000 acres, are under cultivation, and now that the great works for the storage of flood water are completed this amount will be largely increased. The chief crops are cotton, sugar-cane, rice, maize, wheat, barley, millet, and dates, the first being particularly valuable, as the quantity exported is worth about £12,000,000 a year. The minerals and manufactures are of slight importance, though a little is done in pottery, making of woollens, linens, and cottons, morocco leather, and carpets. Of a total import of £15,000,000 more than £5,500,000 comes from Great Britain, and nearly £1,000,000 from British colonies, and of a total export of about £16,000,000 an average of over £8,000,000 is sent to Great Britain. Of all imports the British Empire has 45½ per cent., Turkey, over 13, France, 9½, and Austria, 6½, and of the exports the British Empire receives over 55½ per cent., Russia, over 9, France, over 8, and America, 6½. Of the imports from the United Kingdom the most valuable are cottons and coal, both over £1,750,000, iron, nearly £500,000, and machinery over £350,000, while other lines of importance are apparel and haberdashery, beer, ale, and spirits, railway carriages, flour, preserves, and other provisions, furniture, &c.; grease and tallow, leather, woollens and worsteds, linen yarn and cloths, copper, tin, and oil-seed. From other countries come cottons (Italy and Austria-Hungary—cotton yarns), timber and wood for cabinet-work (Austria-Hungary and Russia), leaf tobacco (Turkey), flour and meal (France and Algeria), fresh and dried fruits, ready-made clothing, and linen goods (France and Austria-Hungary—might be British), rice (India), woollen goods (in woollens, silks, and mixed issues, British trade is gaining), coffee (Brazil), chemicals, china, glass, and earthenware (largely Austria-Hungary—might be British), indigo (India), petroleum (Russia), butter and cheese, sacks (India), soap (inferior qualities from Greece and Turkey, which can compete with cheap local article), candles (Belgium and France—might be British), and paper. Britain might seemingly supply the

cigarette paper, &c., at present sent from Austria-Hungary, nor does there seem any reason why it should not supply the turbotries which at present come from that country also, nor the electrical apparatus that is procured from France. In railway plant and machinery our continental rivals seem often to gain in being able to give more rapid and certain delivery, the best British firms being all too busy to be able to turn goods out without delay. This cannot, however, be called decadent British trade. Firms belonging to the United Kingdom seem, however, to make mistakes in allowing commission business to remain so much in the hands of German firms (which at present nearly monopolise the business), and in employing German commercial travellers. Local agents should be British, and should represent no continental firms in the same class of business, while young men of British nationality should be trained as travellers. All price lists, catalogues, &c., should have metric as well as British sizes, and prices in decimal coinage as well as British, while many of them might be much more attractively got up. The chief exports to the United Kingdom, including transit trade, are raw cotton (over £9,000,000), cotton seeds (over £2,250,000), onions, oil-seed cake, beans, eggs, and manufactured tobacco, while to Great Britain and other countries Egypt exports also raw wool, cane-sugar, oranges and dates, gum, raw hides, rice, henna, lentils, and tomatoes. There are British consuls at Alexandria, Cairo, and Port Said, and vice-consuls at Assouan, Suez, and Zagazig. Letter postage, 2½d per half-oz; postcards, 1d, parcels, *via* Peninsular and Oriental steamers from London, not over 3 lbs, 1s; between 3 and 7, 2s.; between 7 and 11, 3s, *via* France and Italy, 1s additional in each case; telegrams to Alexandria, 1s 7d a word, to Suakin, 2s 6d., to other places, 1s 10d to 2s 3d, according to situation, money orders exchanged, mails from and to London twice or thrice a week.

*Money, &c*—The standard is gold, the Egyptian pound (£1, 0s 6½d) being=100 piastres (piastre=2 46d) The metric system of weights and measures is compulsory in public and administrative transactions, but for other purposes the native weights and measures are in common use. For grain, &c., the ardeb =5 447 bushels=315 rotls of wheat, 320 rotls of beans, 250 rotls of barley, 315 rotls of maize, and 270 rotls of cotton-seed. The kantar =99·05 lbs., the oke=2 75 lbs, the rotl=0 99 lbs, and the okish=1 32 ozs. The diraa baladl =22 83 in., the diraa mumari =29 53 in., the kassabah=139 76 in.=3 88 yards. The feddan=333½ square kassabals=1·038 acre. The Egyptian flag is red, with a silver sloping crescent surmounted by a five-pointed star; or for merchant vessels three horizontal bars, green above and below, and yellow in centre.

Eider, a river of N Germany, near Kiel, flowing to North Sea, navigable for 70 out of 117 m, and forming, with the old Eider Canal, part of the communication between the Baltic and North Sea.

Eisenach, a town in Saxe-Weimar, Germany, 49 m. by rail W of Weimar, manufactures white lead, chemicals, and art pottery; famous for connection with Luther. Pop 32,000.

Eisleben, a town of Prussian Saxony, Germany, 24 m by rail W N W. of Halle, copper mines, birth-place of Luther. Pop 24,000.

Ekaterinburg, a town in Russia, E of the Urals, 312 m by rail S E of Perm. Centre of mining of Middle Urals, iron, copper, gold, quartz, jade, porphyry; manufactures machinery, soap, candles, and linen. Pop 55,500.

Ekaterinoslav, a town in a province of the same name, S Russia. The town on the Dnieper, 323 m by rail N of Sebastopol, has iron works, flour mills, and tobacco, soap, and candle works. The province has an undulating surface, nowhere more than 530 ft above sea-level, valuable beds of coal and iron, and fertile soil with wheat, melons, apricots, peaches, and grapes. Area of province, 24,478 m. Pop 2,113,000, pop of town, 121,500.

Elba, an Italian island in Mediterranean, 6 m off centre of Tuscan coast, 60 m S of Leghorn. Rocky coast and mountainous surface, reaching height of 3380 ft. Iron-mining and smelting, limestone and marble, granite, yellow and red ochre, manganese, porcelain clay, making of wine, salt, tunny fishing and curing, imports provisions and petroleum, and exports iron ore, salt, and wine. From woollens down to personal knick-knacks the inhabitants (especially the better off) use British goods supplied through the mainland centres of Leghorn, Florence, Genoa, and Rome, the small local shops being unable to deal with the United Kingdom direct, but still more might be done were enterprising commercial travellers to supply trade from central stores. British vice-consul. Area, 85 m. Pop 25,000.

Elbe, a river of N W Germany, with a course of 725 m from the Riesengebirge to the North Sea at Cuxhaven, and a basin of over 55,000 m. It is navigable for deep-sea vessels to Hamburg, 84 m. up, and smaller craft can ascend to Melnik, other 440 m., while several of its tributaries—Saale, Havel-Spree, Elde, Eger, Moldau, &c.—are also navigable, and this, and its connection with the Finow, Mullrose, and Plauesche canal systems, and with the Oder, make the lower part of the river the centre of river traffic in Prussia. In the drier part of the year the depth high up is only 21 ins, and below Magdeburg 31, but the boats carry 15,000 to 25,000 cub ft. The distance of 392 m from the Austrian frontier down to Hamburg is covered in three days, but eight or nine are required for the ascent.

**Elberfeld**, a town of Prussia, Germany, on both sides of the Wupper, a tributary of the Rhine, 16 m by rail E N E of Dusseldorf, forming with Barmen a continuous town some 6 m long Great cotton centre ; manufactures all kinds of cotton, and has silk, linen, and woollen manufactures (carpets) ; bleaching, dyeing, turkey-red and other print-works ; also makes machinery, iron and steel ware, and paper, while it supports a large weaving industry in the surrounding district Pop 157,000

**Elbeuf**, a town in the department of Seine-Inferieure, N France, on the left bank of the Seine, 14 m by rail S S W of Rouen, with manufactures of flannels, billiard-table cloth, and other light woollens Pop 19,000

**Elbing**, a town of West Prussia, Germany, on the Elbing R., 48 m by rail E S E of Danzig, and connected by the Kraffohl Canal with the Vistula, 55 m distant, shipbuilding, machinery, and linen Pop 53,000

**Elgin**, a county, with a chief town of the same name, near the centre of the S side of the Moray Firth, N E Scotland, shire flat on coast, undulating southward to a height of over 2300 ft ; drained by Findhorn, Lossie, Spey Agriculture, sandstone, salmon and sea fisheries, and distilling of whisky. Town, 37 m E N E of Inverness, makes woollens Area of county, 305,119 acres Pop 44,800, pop of town, 8460

**Elizabeth**, a town of New Jersey, United States, 12 m by steamer N W of New York, on Staten Island Sound, anthracite coal, sewing-machines, and iron-ware Pop 52,500

**Elizabethpol**, a province of Russia, with a town of the same name, in Transcaucasia, including parts of the valley of the Kur, the Armenian plateau, and the Caucasus, rising to 12,000 ft Copper, grain, cattle-rearing, cotton, tobacco, fruits, vines, silk-worms, and silk fabrics Area of province, 16,721 m Pop 872,000 ; pop of town, 33,000

**Ellesmere Canal**, a canal joining the Severn, Dee, and Mersey, and communicating with the Manchester Ship Canal ; available for vessels of 2½ or in some places of 3½ ft

**Ellice Islands**, a group of nine low-lying coral islands belonging to Great Britain, in the Pacific, N of Fiji, between 5° 39' and 10° 47' S and 176° 5' and 179° 31' E ; cocoanut palms, copra, and shark fins Area, 14 m Pop 2400

**Elmira**, a town of the state of New York, United States, 274 m by rail W N W of New York City, railway centre with manufactures of rails and railway plant, leather, and woollens Pop 36,000

**Elsinore**, or **Helsingor**, a port of Zealand, Denmark, on the narrowest part of the Sound, 37 m by rail N of Copenhagen ; harbour 25 ft at entrance, 22 inside, and dry docks 320 and 340 ft long, ship-repairing and coaling Distance from London, 692 m, Leith, 593, Hull 598 British vice-consul Pop 14,500

**Elswick**, the western part of Newcastle, England, on the Tyne, with the famous ship-building, cannon, and general engineering works of Armstrong, Whitworth, & Co

**Ely**, a town of Cambridgeshire, England, on the left bank of the Ouse, 15 m by rail N N E of Cambridge, with phosphate of lime, market gardens, orchards, fruit preserving, and clay pipes, fine cathedral Pop 7713

**Emden**, a town of Hanover, Germany, 77 m by rail W N W. of Bremen, connected by canal with the Ems, the passage having a depth to the sea of 33 ft at ordinary high water, at which time also there is a depth of 38 ft in the tidal basin, the inner harbour can be entered by vessels of 21 ft at high water Herring fishing and shipbuilding, imports coal, iron, timber, cereals, and general goods, and acts as a distributing centre, telegraphic communication with Valentia and so with America British vice-consul Pop 16,500

**Enfield**, a town on the borders of Middlesex and Hertfordshire, but in Middlesex, England, 10½ m from Liverpool Street Station, London, with a Government small-arms factory, which turns out 2000 rifles a week, or under pressure 5000 Pop 42,738

**England**.—*Surface and Size*—England is the southern, the largest, the most populous, the wealthiest, and the most important, part of the United Kingdom It is separated from Scotland by the natural boundaries of the Tweed, the Cheviot Hills, and the Solway Firth, but the boundary with Wales is artificial The other boundaries are given under Great Britain In shape the country is roughly triangular—the distance in a straight line along the E side from Berwick-on-Tweed to the South Foreland being nearly 360 m, along the S side from the South Foreland to Lands End 320 m, and along the W from Lands End to Berwick-on-Tweed 425 m The total area is 32,538,560 acres, or 50,842 m As the population in 1901 was 30,805,466 the density per sq m, 605, is greater than that of any other European country, Belgium coming next with 588 in 1900 Of the area of the United Kingdom, England has slightly over 42 per cent, of the population it has 74 per cent, of the total revenue of the country it contributes, on an average, over 80 per cent ; of the revenue applied to imperial purposes about 76 per cent, of the coal raised it has 70 per cent, and of the iron 93 per cent Other figures of importance hardly admit of fair comparison.

England has forty ancient counties—*i e* exclusive of counties created by the Local Government Act of 1888 the addition of these makes the total 62, besides 67 county boroughs—the largest being Yorkshire with 3,882,848 acres, next come Lincoln, Devon, Norfolk, Northumberland, Lancashire, Somerset, and Hampshire, in order of size, all over 1,000,000 acres, the

**BRITISH ISLES.**



RAILWAYS \_\_\_\_\_ STEAMER ROUTES \_\_\_\_\_ COALFIELDS \_\_\_\_\_ IFON •



smallest is Rutland with less than 100,000 acres. In 1901, one town (London) had a population of over 4½ millions, or of, inside the Metropolitan police district, over 6½ millions, three (Liverpool, Manchester, and Birmingham), over half a million; five, between 500,000 and 250,000, five, between 250,000 and 200,000, three, between 200,000 and 150,000, sixteen, between 150,000 and 100,000; and forty-two, between 100,000 and 50,000. Along the northern border run the Cheviot Hills with an extreme height of 2122 ft., and S of them is a hollow, a bare country from Tyne to Solway, by the basins of the South Tyne and the Irthing, which reaches nowhere much more than 500 ft. Beyond this depression there stretches southward to Derby and Stirling the long line of heights known as the Pennine Chain, with an extreme height in the northern part of 2892 ft. (Cross Fell) in the centre of 2414 (Wharfedale), and in the S of 2052 (in Peak district). From the Wharfedale group, uplands pass off north-westward to the Cumbrian Mountains of the Lake District—which have a height in the N of 3054 ft. (Skiddaw), and in the S of 3210 ft. (Scafell)—and south-westward into Lancashire to the S.E. of Morecambe Bay, where the highest point is 1831 ft. (Pendle Hill). These uplands form a considerable obstacle to communication between England and the S.W. of Scotland, both London and North-Western and Midland Railways having very heavy gradients to overcome in crossing by Shap Fell and Settle, up the valleys of the Lune and Ribble and down to Carlisle. From the Peak stretches S and S.W. a central plateau, with a height of from 250 to 500 ft., and having in the S.W. part the solitary volcanic Wrekin, near Shrewsbury, on the left bank of the Severn, across which river Wenlock Edge leads to the Welsh mountains, and farther S the Malvern Hills rise to 1395 ft. (Worcester Beacon). From the neighbourhood of Salisbury Plain a number of minor ridges may, roughly speaking, be said to radiate. Two, the North and South Downs (880 and 858 ft.), both chalk, pass almost directly E, the first to the coast, near Beachy Head, and the second to the sea at the North Foreland. To the N.E. extends the line of what is termed the chalk escarpment, marking the outcrop of the lower cretaceous rocks and running in the line of the Marlborough and Hsley Downs, the Chiltern Hills (820 ft.), the Gog Magog Hills, and the East Anglian Heights, along the E of the Ouse basin to the N coast of Norfolk. Farther to the S.W., starting more or less parallel to this, but curving so as to extend much farther to the N, is the oolitic escarpment, marking the outcrop of the oolitic rock. This follows the line of the Cotswolds (1134 ft.), with the high ground stretching to the E of the Warwickshire Avon, and of the

middle and lower Trent, along the Lincoln Heights and the Lincolnshire and Yorkshire Wolds to the Eastern Moorlands and Cleveland in the N.E. corner of Yorkshire (1180 ft.). West of Salisbury Plain lie the Malvern Hills, parallel to and S.W. of the lower Bristol Avon, and farther W. and S.W. still the uplands of Devon, Somerset, and Cornwall, with Exmoor (Dunkery Beacon, 1770), Quantock Hills, Blackdown Hills, Dartmoor (Yes Tor, 2050), and Cornish Heights (Brown Willy, between Launceston and Bodmin, 1370). The rest of the surface of England is flat or undulating, rising nowhere above 250 ft. and in some places forming much lower plains of very considerable extent. Of these last the chief are the Plain of York, on both sides of the Humber, along the Yorkshire Ouse and its tributaries on the N, and on the S along the lower Trent, up the basin of which it curves in a great horseshoe-shaped central flat till it turns north-westward into the Plain of Cheshire, along the Dee, the Mersey, and lower Ribble. To the S of the Plain of Cheshire, along the middle and lower Severn, is the Vale of Severn; to the S.W. of the Plain of York all round the Wash is the Fen district or Fens, along Norfolk, Suffolk, and Essex is the Eastern Plain; and to the S.W. of the last the Valley of the Thames, embracing the whole basin of that river, the Weald, between the North and South Downs on the E, and Salisbury Plain in Wiltshire. The extreme N.E. is drained by the Tweed and several smaller rivers—the Coquet, Blyth, &c, and then in order southward come the larger basins of the Tyne, Wear, Tees, Yorkshire Ouse and Trent, forming the Humber, Witham, Welland, Nen, and Ouse or Great Ouse, entering the Wash, the Yare and Waveney, the Stour, the Chelmer and Blackwater, and the Thames. Along the S there are no large rivers, but the Kent Stour, the Rother, the Arun, the Itchen (flowing to the inlet of Southampton Water), Spithead (N.E. of the Isle of Wight), the Solent (N.W. of the Isle of Wight), the Hampshire Avon, the Dorset Stour, the Frome, the Exe, and the Tamar (flowing to the inlet of Plymouth Sound), may all be noted. On the W coast, beginning at the N, the Eden flows to the Solway, and then come the Lune, Ribble, Mersey, Dee, Severn (with its tributaries, the Teme, Warwickshire Avon, &c, and on the N. of the estuary the Wye and Usk, and on the S the Bristol Avon), Parret, Taw, and Torridge.

The climate is temperate and is rendered warmer than it would otherwise be by the wash of the Gulf Stream, the nearness of all parts to the sea, and the fact that the prevalent winds blow from the W and S.W. and so from the warmer seas, bringing, therefore, heat and abundance of moisture. There is a curious

difference between summer and winter. In midsummer (July) the isotherms, i.e. lines of uniform temperature, run roughly from E. to W., and the heat increases as one passes south from the mean of 59° about the border to the line of 64° along the S. coast and over an area inland which embraces all the Thames basin except the extreme E. In winter (January), on the other hand, the lines run lengthwise, and the heat increases from E. to W., the mean of 39° running in a curved line parallel to and a little inland from the W. coast, down the centre of Wales, round the estuary of the Severn to the border of Somerset and Devon, and then eastward, parallel to the S. coast, to Dover; while the mean of 37° runs in a similar line parallel to, and a little inland from, the E. coast, turns up the S. side of the Thames, midway between the river and the S. coast, and then curves up the W. a little farther inland than the line of 39°. The line of 43° cuts across the extreme S.W. of Wales and the E. of Cornwall. The low ground along the E. coast, across the horseshoe central plain, and down the Thames basin, has an average rainfall of 25 to 30 in., diminishing indeed in the district round the Wash and about Essex to less than 25. Over the greater part of the rest of the country the average is 30 to 40 in., rising in the upland strip extending from the Cumberland Hills southward to the Peak, to the E. of the Mendip Hills in Somerset, Devon, and Cornwall, and along the Cheviots, to from 40 to 60; and amid the Cumberland Hills themselves to 80 or more.

*Produce and Resources.*—From what has been said of surface and climate it will be evident that the western districts and northern, north-midland and other high grounds are best suited for growing and the east, the south, and the lower and flatter parts generally for crop-growing. The chief corn crops are wheat, barley, oats, and rye—the first (of which Eng'nd produces 9½ per cent. of the whole for the United Kingdom) mostly in the south-eastern counties, the second in the east and midlands and the third principally in the north, north midlands, west and south-west. Hops are largely grown in Kent and Hereford, and in lesser quantities in Hampshire, Sussex, and Surrey. Fruit abounds in Kent and other eastern, south-eastern, and southern counties, and in the vale of Severn, and apples are largely grown both there and in Devon, Dorset, Somerset, and Cornwall for the manufacture of cider. Lincoln, Leicestershire, and the North and South Downs are famous for their sheep; Yorkshire and the eastern counties for their horses. In Western England—the pasture division of the country—nearly 68 per cent. of the surface is under permanent pasture, 16 per cent. under grain, 7½ under green crops, and over 11 under clover and rotation grasses;

while in Eastern England over 43 per cent. is under permanent pasture, nearly 31 under grain, 12½ under green crops, and again 11 under clover and rotation grasses. The area under cultivation, particularly under wheat, has for many years been shrinking steadily. Owing to the reduction in the price of grain, due to the competition of foreign foodstuffs, farmers have found it more profitable to turn their attention to the production of meat and dairy produce. A little over 5 per cent. of the area is under woods and plantations, and about 7½ per cent. is mountain and heath land of use for grazing. Some 6 per cent. of the population are dependent on agriculture. The fisheries are important, all sorts of fish being taken in large quantities off the E. coast, while those of most importance on the S.W. are mackerel and pilchards. Probably 90,000 or more of the adult population are dependent on this industry. It is, however, to its mineral deposits and consequent manufacturing industries that England owes its great wealth. The coalfields are large and well distributed, extending right across country from the lower Tyne to the Severn. In the N. on the E. side, is the Northumberland and Durham coalfield, with export of coal; manufacture of iron, steel, chemicals; and shipbuilding, and the manufacture of machinery, &c.; and on the W. side, along the Cumberland coast, the Cumberland field, between Maryport and Whitehaven, with export of coal and limestone, production of iron and steel and shipbuilding at Barrow-in-Furness. Farther S. the coal-measures are extensively developed on both sides of the Pennine Chain—the Yorkshire coalfield on the E. and the Lancashire on the W., the first with extensive woollen industries, and at Sheffield manufactures of cutlery, and the second with such a great development of cotton industry as to make many parts of the district one continuous town. The wool comes from Australia and New Zealand, South Africa, the Argentine, India, Turkey (both European and Asiatic), Chile, Peru, Uruguay, &c., and is manufactured in Yorkshire, and in minor quantities in Wiltshire, Gloucestershire, and Worcestershire. The cotton comes from the United States, Egypt, India, Brazil, Peru, &c., to Liverpool and Manchester, and is distributed thence to all the manufacturing towns of Lancashire. Both fields have naturally large manufactures of machinery and chemicals. From the Yorkshire and Lancashire coalfields there are extensions southward, one of which appears as an outlier at Stoke, where it is used for the pottery industry of that neighbourhood, while others circle round in a horseshoe curve by Barrow-in-Furness, Tarnworth, Birmingham and Wolverhampton, Sarum, and the valley of the Don and Cheshire. These have many

industries for which reference may be made to the districts and towns. Farther S are the detached field of Forest of Dean in Gloucestershire, on the N.W. side of the Severn, and the deposits on the opposite side about Bristol. About one-third of the whole output comes from the Yorkshire field, about a fourth from the Durham and Northumberland field, and about a sixth from the Lancashire and Cheshire field. Iron ore is often found along with the coal, and about two-thirds of the whole production come from the Cleveland district in the N. Riding of Yorkshire, the N. of Lancashire, Lincolnshire, Northamptonshire, Leicestershire, and N. Staffordshire, while the bulk of the pig-iron is made in the Cleveland district, in N. Lancashire, and on the Durham and Northumberland coalfield. The steel production follows the iron. Of other minerals the most important are fireclays, got in the Durham, York, Stafford, and Lancashire coalfields, salt from the basin of the Weaver in Cheshire, from Worcestershire, N. Lancashire, and the lower Tees; china-clay found in Cornwall and Devon, but taken mostly to the N. Stafford district for working, tin from Cornwall, and lead from Durham, Derby, Cumberland, Westmorland, Shropshire, Northumberland and York. Many of the northern, north-midland, and western counties have valuable stone quarries, and in different districts there are workable quantities of phosphate of lime, gypsum, copper, arsenic, alum, barytes, ochre, and zinc. Limestone (other than chalk) and sandstone are widely distributed, the great bulk of the chalk comes from Kent, but considerable quantities are obtained in Essex, Hampshire, Sussex, and Surrey, copper comes from Cornwall and Devon, gypsum from Cumberland, Nottinghamshire, Staffordshire, Sussex, and Derby, igneous rocks from Leicester, Cornwall, Cumberland, Northumberland, Shropshire, Warwick, and York, and slate from Cornwall, Devon, Lancashire, York, Westmorland, and Cumberland. The total value of coal raised in an average year is some £60,000,000, of iron £3,800,000, of sandstone and clay each over £1,000,000, limestone (other than chalk) nearly £1,000,000, igneous rocks, salt, and dressed tin ore, between £650,000 and £500,000, chalk, lead, slate, and sand and gravel, between £210,000 and £100,000, arsenic, and gypsum, between £70,000 and £60,000, zinc, barytes, and copper ore, between £30,000 and £25,000, and the other minerals of less value bring up the total to some £70,000,000. The persons employed in connection with coal-mining in England are over 561,000, in connection with iron-mining over 14,000, and in connection with mines producing all other substances about 15,600, while 15,600 are connected with quarrying operations. Of other manufactures Barnsley is a

linen centre; silk is made in Derbyshire, N. Staffordshire, and E. Cheshire, and at Bradford; and in Kent there is a considerable amount of paper-making. Some 35 per cent. of the whole population are engaged in industrial occupations. The shipping, and trade and commerce (imports and exports), are dealt with under Great Britain.

**Communications.**—There are everywhere good and well-kept roads, and there are over 3000 m. of canals, as well as a considerable amount of navigable river. Though this is so, however, it must be confessed that much might be done in the way of improving and extending good water communication fit for present-day requirements, and of thereby cheapening and improving means of communication. The introduction and rapid progress of railway communication arrested the development of the canal system, and what is now required is that river channels and existing canals should be deepened and widened so as to provide for the passage of vessels of much larger size than those at present in use. Were this done, the network of canals which at present exists across country, in the great central plain and elsewhere, would become of immense value for cheap transport (*see* Germany), and extensions, so as to give through communication between the Mersey, Thames, Southampton Water, Severn, Humber, and Tyne, by deep trunk-lines intersecting about Birmingham, would be of very great advantage. There is good railway communication, the total length of lines being over 15,000 m. London is naturally the centre, and from it trunk lines pass in different directions. Of these the London, Chatham, and Dover (Dover), and London, Brighton, and South Coast (Newhaven), and South-Eastern (Folkestone), give continental communication, as does also the London and South-Western (Southampton, Salisbury, Exeter, and Devonport); the Great Western runs up the Thames Valley (Bath, Exeter, Plymouth, Cornwall, Bristol, &c.), the Great Eastern through the eastern counties and the southern fens, with continental communication from Harwich, the Great Central to Lincolnshire, Yorkshire, and Lancashire, and the Great Northern and the North-Eastern, the Midland, and the London and North-Western provide routes for the north, and give direct communication with the Scottish trunk lines—the first by the East Coast junction service, *via* Peterborough, Doncaster, York, and Newcastle to Berwick, where it meets the Scottish North British for Edinburgh, Glasgow, &c., the second by Bedford, Leicester, Nottingham, Sheffield, and Leeds to Carlisle, where it meets the North British, Caledonian, and Glasgow and South-Western, and the last by Northampton, Rugby, Stafford, and Crewe to Carlisle, where it meets the Caledonian (for Glasgow, Edinburgh, &c.), and other

Scottish lines as before The most important cross-country line is the Lancashire and Yorkshire, connecting Leeds with Manchester and Liverpool, and an extensive network of branches stretches out from and connects the various main lines

**English Channel**, the part of the sea between the S coast of England and the N W coast of France, about 300 m long, varying in breadth from about 110 m at W end (extreme width 140 m) to 21 m at the Strait of Dover, and with a depth having a gradual slope from 50 fathoms on W to 15 fathoms on E To the N of the Channel Islands there is a trough known as Hurd's Deep, with 60 to 70 fathoms The English coast-line is nearly 400 m, and the French about 570 Owing to the meeting of the tide flowing up the Channel itself with that flowing down the North Sea, the tidal range along the S side of the Channel is very great (35 to 40 ft), and on the N side very small (6 to 12 ft.), while at Poole there are two high waters with 3½ hours between, and at Southampton two high waters with 2½ hours between There is a slight but constant current from W to E Oyster, pilchard, and mackerel fisheries It has been proposed to bore a Channel tunnel from Dover for 23 m to Sangatte, near Calais, but the project is, for military reasons, vetoed by the British Government

**Ensenada**, a port of Buenos Ayres, Argentine, 35 m by rail from Buenos Ayres, and 5 from La Plata of which it is the port, harbour connected with the Rio de la Plata by a canal, which has a full depth of 22 ft Imports general goods; exports grain, hides, bones, tinned meats. British vice-consul

**Entre Rios**, a state of the N E of the Argentine Republic, hilly in centre, and sloping E to the Uruguay, and W to the Parana, acacias and palms, wheat, maize, cattle, sheep, horses, wool, hides Area, 28,784 m Pop 344,000

**Épernay**, a town in the department of Marne, N E France, on the Marne, 90 m by rail E N E of Paris, centre for champagne, and manufactures earthenware Pop 20,500

**Épinal**, the chief town of the department of Vosges, N E France, 19 m by rail W N W of Chalons, on the Moselle, with making of cotton and paper, and embroidery Pop 28,000

**Epsom**, a town of Surrey, England, 15 m by rail, S S W of London, with medicinal spring containing sulphate of magnesia, and downs on which the famous "Derby" and other races are held Pop 10,913

**Erfurt**, a town in S of Prussia Saxony, Germany, on a rich plain along the Gera, 13 m by rail W of Weimar Manufactures all kinds of textiles, machinery, and shoes, and has trade in flowers and flower-seeds. Pop 85,500

**Erie**, a town in Pennsylvania, United States, on the lake of the same name, 115 m by rail N of Pittsburg, with a large harbour, 9 to 25

ft deep formed by Presque Island Imports iron ore and Canadian timber, and exports coal, oil refineries, tanneries, paper-works, foundries, and flour-mills Pop 53,000

**Erie Canal**, one of the most important canals in the United States, extending 387 m from Buffalo, at the E end of Lake Erie, to Albany on the Hudson, with a width at surface of 70 to 100 ft, and a minimum depth of 7 ft Though it is frozen for a considerable portion of the year, and the boats on it carry not more than about 250 tons, more than 45,000,000 bushels of grain are sometimes carried to Albany during the time it is open

**Erie, Lake**, the second lowest of the five Great Lakes between Canada and the United States, receiving the Detroit from Lake Huron by Lake St Clair, and sending off the Niagara to Lake Ontario To the N is Ontario, touching the W end is Michigan, to the S are Ohio and Pennsylvania, and touching the E end is New York The lake is about 240 m long, varies in width from 30 to 60 m, has an area of about 10,000 m, and a mean surface level 9 ft. below Lake Huron, 326 ft above Ontario, and 573 above the Atlantic The greatest depth is 210 ft., and the mean depth about 70 The shores are low, and the good harbours, though few, are important, as they are connected with the surrounding districts by numerous lines of rail The navigation is dangerous, as the winds do not require to be strong to raise a heavy swell From the beginning of December to April the lake is partly frozen. It is connected with Lake Ontario by the Welland Ship Canal on the Canadian side, with the Hudson by the Erie Canal, and other canals give access to the Ohio

**Eritrea**, the sphere of Italian influence on the W side of the Red Sea near its S end, and bounded N W and W by Egypt, S and S W by Abyssinia, and N E by the Red Sea. It consists of a quadrangular part to the N W, with a long narrow strip running down the coast to the strait of Bab-el-Mandeb, and the surface slopes up from the narrow, hot, coastal region to a plateau, some 7000 ft. above sea-level, and much cut up by deep valleys There is a coast-line of about 580 m, and the quadrangular part extends inland about 170 m, and the coast strip, on an average, about 40 m Area estimated at 97,500 m, and pop at 450,000

**Erivan**, a province in Trans Caucasia, Russia, with a chief town of the same name The surface of the former is part of the Armenian plateau, 6000 to 8000 ft. above sea-level, with peaks rising above it to a height of 13,000 to 16,000 ft (Mount Ararat, 16,916), and is drained by the Arax and its tributaries Copper and salt, in valleys cattle-breeding, silk-worm-rearing, and cultivation of grain, vegetables, cotton, and vines Area of province, 10,075 m Pop 803,000; pop of town, 29,500

**Erlangen**, a town of Bavaria, Germany, 12 m by rail N. of Nuremberg, with stocking and glove factories, and mirror works. Pop 23,000

**Erzberg**, a mountain in Styria, Austria-Hungary, composed almost entirely of carbonate of iron, which is worked in open quarries

**Erzeroum**, a town in Armenia, Turkey in Asia, 110 m S.E. of Trebizond, on a plain some 6000 ft. above sea-level near the western sources of the Euphrates. At junction of the trade routes from and to Trebizond, Trans-Caucasia, Persia, Kurdistan, Mesopotamia, and Anatolia, the place is a great distribution centre. Manufactures morocco leather, and copper and iron wares. Imports cotton and cotton yarns, prints, muslins, handkerchiefs, woollens, metals, and tea, all largely from the United Kingdom (28½ per cent of whole), sugar, leather, petroleum, coffee, and cattle and horses, from other European countries (about 16½ per cent), carpets, shawls, rice, and dried fruits, from Persia (about 16 per cent of whole), and native cottons and linens, hides, furs, linseed, and fruits, from Turkey (about 8 per cent of the whole). The chief exports to foreign countries (all to Russia, France, and Austria-Hungary—the last small) are cattle, furs, hides, linseed, and wheat and barley; and to Turkey, cattle and horses, pasdarma, and wheat. Coal and copper are found. British trade could here, as all over the East, be greatly helped by active agents on the spot. British consul Pop 39,000

**Erzgebirge**, a mountain range stretching for about 100 m between Saxony and the N.W. of Bohemia, with a mean height of 2000 to 2500 ft. and rising at the Keilberg (Bohemia) to a height of 4072 ft, and in the Richtelberg (opposite, in Saxony) to 3980 ft, rich in minerals, lignite, silver, and lead, and in smaller quantity tin, iron, and cobalt, many of valleys beautiful, well-wooded, fertile, and thickly populated, crossed by railways from Freiberg to Klostergrab, and from Marienberg to Komotau

**Esbjerg**, a port in S.W. of Jutland, Denmark, outer tidal harbour 14 ft at low water and 19 ft at high water, dock, 18 ft; depth on bar 13 ft low water, 20 ft high water. Imports coal, grain and meal, oil-cake, artificial manures, salt, petroleum, and general goods, exports (largely to Great Britain) pork, meat, butter, eggs, cattle, hides, fish, &c. Regular communication from Harwich and Grimsby, distance from London, 390 m, Harwich 338, Grimsby, 360. British vice-consul Pop 6000

**Esquimalt**, a fortified coaling station and port at the S end of Vancouver Island, British Columbia, Canada, on Juan de Fuca Strait, 5 m W of Victoria, magnificent harbour with depth of 36 ft, dry dock, 430 ft long with a depth on sill of 27 to 29½ ft at spring tides. Pop 2000

**Essen**, a town of the Rhine Province of Prussia, Germany. On the Ruhr coal-field,

and 2 m from the right bank of the River Ruhr; 22 m. by rail N.E. of Düsseldorf. Coal, iron, and steel, with the famous Krupp cannon and steel works with 30,000 hands, 1600 furnaces, 150 steam hammers, and all other appliances in proportion. Pop 119,000.

**Essequibo**, a river and a district in the W. of British Guiana, the former with a course of 620 m. District produces greenheart timber.

**Essex**, a maritime county N. of the estuary of the Thames, England; coast low, marshy, and much broken, and surface flat, farther inland undulating, drained by Thames and its tributaries, Colne, Chelmer, &c. Fertile; produces wheat, tazeels, saffron, carraway, and hops, salt, and oyster fisheries, brewing and straw-plait; other manufactures connected with London. Area, 987,028 acres. Pop 1,085,576

**Esslingen**, a town of Württemberg, Germany, on the right bank of the Neckar, 9 m. by rail E.S.E. of Stuttgart. Machinery, lithography, woollen fabrics and yarn, cotton yarn, iron, silver, and tin wares. Pop 27,500

**Est, Canal de l'**, a canal of N.E. France, supplying the basins of the Meuse and Moselle, uniting these rivers and the Saône, and having communication with the Marne-Rhine Canal; length, 285 m

**Estremadura**, a province in the centre of the E coast of Portugal, hilly in N but with plains along the rivers Tagus and Sado. Bulls and horses, wheat, vines, olives, pines, oaks, and chestnuts. Area, 6876 m. Pop 1,233,000

**Etruria**, a small town of Staffordshire, England, 2 m by rail S. of Burslem, 1 m from Stoke, and 17 from Stafford; iron works and the famous Wedgwood potteries. Pop 6000

**Euboea**, or **Negropont**, the largest island of Greece, lying along the N.E. coast, in the Aegean, about 104 m long, and varying in breadth from 33 to 4 m, the channel separating it from the mainland is so narrow that near the centre, where it has a depth of 23 ft, it is crossed by a bridge, hilly, rising near centre of N coast to over 5700 ft, but fertile. Cattle, sheep, goats, swine, corn, wine, oil, figs, cotton, wool, pitch, and turpentine. Area, 1420 m. Pop 110,000

**Eupatoria**, a port on W coast of Crimea, Russia, with a dangerous roadstead where vessels over 18 ft must anchor a quarter of a mile or more from the town. Exports corn, wool, hides, butter, tallow, and salt. British consular agent. Pop 13,500

**Euphrates**, the largest river of western Asia, draining the extreme E. of Asiatic Turkey, with a course of 1600 m to the head of the Persian Gulf, and a basin of 260,000 m. From the mouth up to the junction of the Tigris the united stream is known as the Shat-el-Arab. The navigation is much interfered with by rapids and falls, but the course could, without much difficulty, be rendered passable

for light steamers at all states of the river for a long distance up, and much might be done to store the flood-water for irrigation. Meanwhile vessels of some size can get up about 150 m from the Persian Gulf (*see* Bussorah). A railway along the course of the river has long been projected, as giving a short route to India and the East, but two British concessionaires have had to give up the scheme owing to foreign jealousies. It is still to be hoped that a line may be made with British capital from the Beyrout line at Damascus to Bagdad and the Persian Gulf, but meanwhile a concession has been granted to the German owners of the Anatolian railway from Scutari to Angora in the N, and to Konieh in the S, to extend, within eight years, the second of these lines by Adana and Mardin to Mossoul, and thence to Bagdad and the sea; while the Turkish Government proposes to extend the first branch by Sivas to Diarbekir, from which the German concessionaires would continue the line to a junction with their line at Mardin. The German line would probably cost about £20,000,000.

**Eure**, a department of N W France, along the Seine basin near the mouth of the river, surface undulating and soil fertile. Wheat, oats, cider, beet-root, colza, hemp, flax, and timber, iron, manufactures of woollens, cottons, pins, and paper. Area, 2300 m. Pop 339,500.

**Eure-et-Loir**, a department of N W France, immediately S of that just described, E undulating, W hilly with wood, drained by the Loire and tributaries of it and the Seine. Silk, paper, wheat, oats, cider, manufactures woollens, cottons, hats, and boots and shoes. Area, 2268 m. Pop 275,500.

**Europe.**—*Surface and Size*—Europe is the most westerly continent of the old world, and though the smallest yet the most important of all the divisions of the globe, with its mainland lying between 36° and 71° 6' N, and between 66° 20' E and 9½° W. The extreme distance from Nordkyn on the N to the S of Greece is about 2400 m, the extreme width from E to W about 3000 m, and the area inside the limits indicated below about 3,700,000, with the islands it is about 3,900,000. Europe is bounded N by the Arctic Ocean, separated from Asia on the E by the Ural Mountains, the Ural River, and the Caspian Sea, and on the S and S E by the Caucasus, the Black Sea, the Bosphorus, the Sea of Marmora, the Dardanelles, and the Aegean Sea, is bounded along the rest of the S by the Mediterranean, approaches the N W of Africa at the Strait of Gibraltar (8½ m), and is bounded on the W by the Atlantic Ocean and its inlets of the English Channel and the North Sea. To the W of this are the insular portions of the British Islands and Iceland, and to the N, Nova Zembla,

Spitzbergen, &c. The coast line, some 48,000 m in extent, is very much broken, and throws out the great south-pointing peninsulas of Norway and Sweden (Scandinavia), Spain and Portugal (The Peninsula), Italy, Turkey and Greece, and the Crimea, and the north-pointing peninsula of Denmark. All along it are many islands of greater or less size, and the broken nature of the whole line provides in all quarters sheltered roadsteads and situations for harbours. The many more or less land-locked seas and inlets running inland on all sides except the E, and the navigable rivers, bring a very large proportion of the total area within convenient reach of the sea, and so provide ready facilities for commerce, which have been taken full advantage of by the energetic races who people most of the centre, N and W. Except in Russia no place is more than some 300 m from sea communication, and the great plain of Hungary may be said to be the only region of large size that finds access to the sea at all difficult. In the N there is, of course, interruption of traffic owing to the seas and water-ways being frozen in winter. The mountain regions of the continent are three: the chain along the W of Scandinavia, the Urals on the E, and a series of chains running one after the other from E. to W across the centre and S. This last line, beginning at the Atlantic in the ridges of the Spanish plateau, and along the Cantabrian Mountains and the Pyrenees, passes through France by the Mountains of Auvergne and the Cevennes to the Jura and the Alps, and thence westward by the Carpathians, the hills of the Crimea, and the Caucasus to the Caspian; there are northern offshoots in the Vosges and mountains of Bohemia and southern Germany, and southern offshoots in the Apennines, the Dinaric Alps and Pindus range, and the Transylvanian Alps and Balkans. The rest (about two-thirds) of the surface is a great plain, of which by far the greater part is under 600 ft above sea-level, and which, beginning in the S. of England and the N and E of France, stretches north-eastward to the tundras along the Arctic Ocean, and eastward and south-eastward to the Caspian and Black Seas, while the low ground also includes strips along the coasts and lower river valleys of Portugal, Spain, the S of France, Italy, Turkey, and Greece, as well as the plains of Hungary. A considerable area along the N end of the Caspian is under sea-level. There are two great lake areas, one in low country in the N round the Baltic, and the other high among the Alps, but both alike in districts that have been subjected to intense ice action. A very large number of the principal rivers flow from two markedly different and widely separated centres. From the lofty Alps come the Rhine, which flows to the North Sea, the Rhone, Po, and Adige, flowing

to the Mediterranean, and the upper waters of the Danube which go to the Black Sea. From the low Valdai Hills district radiate the headwaters of the Northern Dwina to the White Sea, the Volga to the Caspian, the Don and Dnieper to the Black Sea, and the Duna or Western Dwina and the Niemen to the Baltic. This is of importance for water-way communication, as the inter-approach of the river sources minimises the lengths of the canals necessary to connect them. The distribution of the many other important rivers of more local origin is noticed in connection with the different countries. Owing to the position of the continent in the N temperate zone, the influence of the Gulf Stream along the N W, the great amount of what may be called inland water, and the slope and exposure of the great plain, Europe has generally a climate more temperate and equable, and yet more varied, than any other continent. The extreme N is Arctic, and the whole of the S along the Mediterranean, sheltered from the cold N and E winds by the mountain barriers already described, is sub-tropical. The S W winds, which are the most frequent, blowing over the warm water of the Gulf Stream, bring abundance of moisture and heat, and as there is no western barrier of mountains to cut them off from the interior, a sufficient rainfall is carried far inland, and nowhere is agriculture impossible owing to absence of moisture, except in the S E of Russia, and in the interior of Spain. Along the whole of the W side, and on the line of the southern and central mountain ranges, the annual rainfall is 40 to 80 in, or even more, over the great plain it is from 20 to 40, and in N and the areas of scanty fall, already mentioned, under 20. Where there is high land with heavy snowfall, or large lakes, the snow serves by its melting as a reserve store to feed the rivers during the dry, warm part of the year. Generally speaking, the rainfall decreases, and the range of temperature increases, from W to E. In January the line of 32° Fahr curves through the S of Norway round close to the S side of the Danube, and W and W. by S across the Crimea to near the centre of the Caspian, while at the same time the extreme N lies between 0° and 10°, and the line of 50° sweeps through Spain and along the line of the Mediterranean coast. In July the N is touched by the line of 50°, while the S lies between 75° and 80°, and the line of 60° is deflected far to the N of its normal course. One result of all this is that every kind of cultivated product—wheat, barley, vine, orange, olive, &c—can in Europe be grown much farther N than in any

other part of the world, barley being indeed grown regularly in Norway (*see* Alten) inside the Arctic Circle.

*Products, Resources, &c*—The vegetable products are, as might thus be expected, in general abundant, the central regions producing timber (oak, ash, beech, elm, pine, &c), cereals, fibres (flax and hemp, &c), the hardier fruits (apple, pear, plum, cherry, &c), potatoes, beet-root, &c; the S sub-tropical fruits (vine, orange, peach, lemon, apricot, olive, fig, &c), and the warmer regions of the N the hardier cereals. Everywhere there is abundance of pasture for cattle, sheep, horses, &c, and the fishings on coast and river are exceedingly varied and productive. Though the precious metals are not very abundant, the continent is otherwise rich in mineral wealth—coal, iron, lead, zinc, copper, tin, &c. The chief coal and iron producing countries are Britain, Germany, France, Belgium, and Russia, iron only, Sweden and Spain, copper, Sweden and Spain, lead, Spain, zinc, Germany, mercury, Spain and Austria, sulphur, Sicily, and salt, Austria. The existence of coal and iron together has been of great value in the development of the enormous manufacturing industries of Europe. As to these matters, however, full details will be found under the different countries that make up the continent. These are, in order of size, Russia, Austria-Hungary, Germany, France, Spain, Sweden, Norway, United Kingdom, Italy, Turkey, Roumania, Bulgaria, Portugal, Greece, Serbia, Switzerland, Denmark, the Netherlands, Belgium, Montenegro, Luxemburg, Andorra, Liechtenstein, San Marino, and Monaco. The population is about 360,000,000.

**Evansville**, a town of Indiana, on the Ohio, 162 m by rail E S E of St Louis. Coal and iron; terminus of Wabash and Erie Canal, railway centre, and centre of distribution. Pop 59,000.

**Évreux**, chief town of the department of Eure, N W France, on Iton, 67 m by rail W N W. of Paris, manufactures of paper, linen, &c. Pop 18,500.

**Exeter**, the chief town of Devonshire, England, on Exe, 171 m by rail W S W of London, and 75 S W of Bristol, ship canal, 5 m, to Topsham and Exmouth, takes vessels of 12 ft draught. Imports general goods, exports barytes, timber, &c; agricultural implements, nurseries, gloves, Honiton lace. Pop 46,940.

**Exmouth**, port of Devonshire, England, on left bank of Exe, at mouth, 11 m by rail S S E of Exeter, dock 530 ft long with 13 ft. on sill at neap tides, 17 ft at spring. Imports general goods; exports bricks and clay, watering-place, fishing, lace-making. Pop 10,457.

## F

**Faenza**, a town of Italy, 31 m. by rail S.E. of Bologna, at the junction of the Zenelli Canal and the Lamone; manufactures paper, silk-twist, linen, and majolica ware. Pop. 15,000.

**Falkirk**, a town of Shropshire, Scotland, 28 m. by rail W.N.W. of Edinburgh, and 22 N.E. of Glasgow; iron founding; cattle fairs now declining in importance. Pop. 22,282.

**Falkland Islands**, a British crown colony in the S. Atlantic, 300 m. E. of the Strait of Magellan, and 1015 S. of Monte Video. Of over 100 islands, most of which are uninhabited, the largest are East Falkland (2849 m.), and West Falkland (2300 m.). Surface undulating, highest point 2315. There are good natural harbours, but no trees and no coal, peat being the fuel in use. The climate resembles that of the Orkneys, but is stormy and wet. Many penguins. Chief industry sheep-rearing. Imports coal and general goods; exports wool, sheep-skins, live stock, seal-skins, and tallow. Trade mostly with United Kingdom, but 5 to 10 per cent. with Chile, Argentina, and Uruguay. Of over 160,000 tons entered and cleared most were British bottoms. Chief town Port Stanley or Stanley Harbour on E. Falkland. Harbour from 30 ft. to 15 ft. at spring tides at quays. Pop. 900. Regular communication from Liverpool. Mails to and from London every four weeks. Letters, 1d. per half-oz.; postcards 1d.; parcels, not over 3 lbs., 1s.; between 3 and 7, 2s.; between 7 and 11, 3s.; telegrams by post from Monte-video; letters, 25 days; money orders to and from. Pop. 2043.

**Fall River**, a town of Massachusetts, at the mouth of the Taunton, 49 m. by rail S. of Boston; large and deep harbour, and the Fall River supplies abundant water-power. cotton, dye-works, mills, machinery. Pop. 103,000.

**Falmouth**, a seaport of Cornwall, England, on the S. side of the estuary of the Fal, 63 m. by rail W.S.W. of Plymouth; depth in the tidal harbour varies at extreme low water from 18 to 23 ft.; graving docks 350 and 557 ft. long, and at spring tides taking vessels of 14 and 20 ft. respectively; pilchard fishery. Imports general goods; exports copper ore, granite, stone, china-clay, hemp and wire rope, timber, fire-brick, and pig-iron. Distance from Liverpool, 322 m.; Leith, 648; Glasgow, 435. Pop. 11,773.

**False Bay**, in the S.W. of Cape Colony, 25 m. S. of Table Bay.

**False Point**, a cape and an excellent harbour in Bengal, 43 m. by Kendrapana Canal, E. of Cuttack; centre of trade of Orissa.

**Falun**, or **Fahlun**, a town of Sweden, 57 m. by rail W.S.W. of Gefle, with famous copper mines. Pop. 8000.

**Fanning**, a coral island in Pacific, 3° 68' N. and 158° 23' W., with pearl shell and guano; on cable route from Vancouver to New Zealand.

**Faroe Islands**, a group of islands forming part of the Danish Kingdom, 180 m. N.W. of Shetland, and 225 S.E. of Iceland. Twenty-four in number, of which 17 are inhabited, they form a compact group, 63 m. long from N. to S. and 45 from E. to W. They are volcanic, and the surface is hilly, rising from a rocky coast to peaks of nearly 3000 ft. There is coal in Sæderoe, but it is not yet profitably worked. Chief industries are sheep-farming, fishing and fowling, which provide the exports in the form of wool, fish (salt and dried, exported to Italy and Spain), train-oil, skins, and feathers, worth some £60,000 a year. Largest islands Strömö, Borö, Österö and Vaagö; mild climate. Thorshavn (p.p. 1000) on Strömö, with a deep harbour but no quays, is the capital. Trawling off islands, but trawlers must not enter territorial waters with gear on board, except under exceptional circumstances. Regular communication, in season from Leith 24 hours' steam. Postage of letters and parcels as for Denmark; money orders exchanged. Area of islands, 512 m. British consul at Thorshavn. Pop. 15,500.

**Fashoda**, an administrative district, and a town of the Eastern Anglo-Egyptian Sudan, on the White Nile, 60 m. below Sobat, at the junction of the Sobat River.

**Fastnet**, a lighthouse 4 m. W.S.W. of Cape Clear, S.W. coast of Ireland, with revolving light 148 ft. above sea-level, visible 18 m.

**Faversham**, a river port of Kent, England, on the Swale, about 2 m. from its mouth and 52 m. by rail E.S.E. of London; valuable oyster fisheries, and powder and gun-cotton mills. Pop. 11,290.

**Fayoum**, a province of upper Egypt, on the W. bank of the Nile, a little above the head of the delta. Steady irrigation has made it very fertile. Cotton, sugar, flax, hemp, oranges, grapes, peaches, figs, olives, pomegranates, roses and other flowers. Area, 493 m. Pop. 371,000.

**Fécamp**, a port of the department of Seine-Inférieure, N. France, 28 m. by rail N.N.E. of Havre, with tidal harbour, and dock taking vessels of 20 ft. at neaps and 26 ft. at springs. Cotton, wool, and oil, mills, distilling of Benedictine liqueur, sugar refineries, tanneries, &c. Imports coal, lumber, codfish, ripe and salt, and ground nuts; exports oil-cakes, salt, and Benedictine liqueur. Of about 45,000 tons 70 per cent. were British bottoms. Of imports of over £190,000 about 28 per cent. come from Great Britain, the bulk of the export goes to the United States and Newfoundland, very little to the United Kingdom. British vice-consul. Pop. 15,500.

**Fernandina**, a port of Florida, on Aurelia Island, at the Atlantic terminus of the railway from that ocean to the Gulf of Mexico, harbour 23 ft. deep, but shifting bar, considerable transit trade, especially in lumber. British vice-consul. Pop 5000

**Fernando Po**, an island belonging to Spain, in the Gulf of Guinea, W. Africa, 45 m long and 5 to 15 wide; hilly, rising to 9000 ft. Valuable timber, cotton, cacao, coffee, palm-oil. Regular communication from Liverpool. Mails from and to London every four weeks, letters, 2½d per half-oz, postcards, 1d. Area, 800 m. British consul. Pop 28,000

**Ferrol**, a port and naval station of N.W. Spain, on the Bay of Corunna, strongly fortified, with royal dockyards and workshops, excellent harbour, large dry dock (non-government) being constructed. Imports coal from United Kingdom, raw cotton from America, and manufactures naval stores, exports practically nil. British vice-consul. Pop 36,000

**Fez, or Faz**, the chief city of Morocco, in the W. near the left bank of the Sebu, 100 m E of the Atlantic at Rabat, centre for the distribution of European manufactured goods throughout the interior of Africa as far as Timbuctoo. Receives silks, cottons, tea, sugar, spices, powder, weapons, &c, exports gums, gold, dates and other fruits, morocco leather, pottery, and gold and silver wares. British vice-consul. Pop is estimated at about 140,000

**Fife**, a county of E central Scotland, between the Firths of Forth and Tay, surface undulating, rising to 1700 ft, drained by Eden and small streams running to Firths, rich coal-mines in the south, mainly parrot and splint coal, besides ironstone, limestone, and freestone, blast-furnaces, linen and floor-cloth industries, salmon and deep-sea fishing. Area, 322,844. Pop 218,840

**Fiji Islands, or Viti Islands**, a group of volcanic islands forming a British crown colony in the Pacific between 15° and 22° S and 176° E and 178° W, some 250 m N.W. of the Friendly Islands, 700 m S.E. of New Caledonia, and 630 S.W. of Samoa. The colony includes also the island of Rotumah, 250 m. distant, almost due N. The group, with its 200 islands, of which 80 are inhabited, forms a rough ring open to the S, with the large islands of Viti Levu and Vanua Levu on the N.W., the former with an area of 4250 m (90 by 50), the latter 2300 (100 by 25). The other islands of the colony make up a total of 8045 m, inhabited islands about 7700 m. Mountainous, reaching a height of 4500 ft, temperature ranging from 88° Fahr in February to 68° in June, fertile and well watered, the rainfall varying, but on the south-eastern or windward side reaching 100 in. The islands would be an important point between Australasia and Central America were Panama

Canal made. Imports, to the value of some £300,000 a year, general goods (especially drapery), bread-stuffs, galvanised iron and goods, hardware, iron (bar, rod, sheet, &c), machinery, oils, and timber, exports, to the value of over £500,000, sugar, copra, bananas, pine-apples, &c, and colonial distilled spirit. Minor exports are cocoa-nuts, pea-nuts, bêche-de-mer, pearl shell, maize, turtle shell and vanilla, and coffee, cacao, limes, lemons, ginger, and spices can be produced, but the cost of labour has, so far, prevented their being raised and exported at a profit, though planters have lately been turning their attention to some of them. Of over 200,000 tons entered and cleared per annum, 90 per cent are British. Suva, the chief town, on the S.E. of Viti Levu, with a good harbour, has a pop of 1100. Regular communication from London, Sydney, and Auckland. Distance from Sydney, 1725 m, Auckland, 1140, Wellington, 1600, Vancouver, 5235; and San Francisco, 4920 (both *via* Sandwich Islands), London, Liverpool, and Glasgow about 11,700. Postage, 1d per half-oz, postcards, 1d, parcels under 1 lb 1s, and 8d for each additional pound up to 11 lbs, telegrams by Turkey, 3s 4d a word, other routes, 3s 7d, money orders exchanged, mails from and to London every week, letters, 35 days *via* San Francisco, 44 *via* Suez. Pop 118,000

**Finistère**, a department of N.W. France, at the end of the Peninsula of Brittany, between the English Channel and the Atlantic, undulating wood and meadow land reaching a height of 1280 ft, drained by Aulne, Quimper, and Quimperlé. Sardine fisheries, grain, dairy produce, flax, apples, and cider. Area, 2595 m. Pop 773,000

**Finisterre**, a point at north-western extremity of Spain, with a lighthouse visible 21 m.

**Finland**, a grand-duchy forming part of Russia, between the Gulf of Bothnia and the Gulf of Finland. The coast is much indented, and fringed by thousands of small islands. The interior is an undulating table-land, some 300 ft above sea-level, and rising in N. to over 4100 ft., and 15 per cent is occupied by marsh and bog, while about 13 per cent consists of lakes of all sizes. Between the largest, Lake Ladoga (partly in Russia proper), and Lake Saima, is a channel interrupted by the fine Imatra rapids, and between Lake Saima and the Gulf of Finland, a canal of 36 m—all the large lakes are connected by natural channels or by canals. The rivers, though unimportant in size, and useless for navigation, serve to float down timber from the extensive and valuable forests covering three-fifths of the interior, they are rich in fish, and supply water-power for mills. Rye is the principal cereal, but barley, oats, and even wheat are grown. Seals abound on the coast, and in

**Lakes Ladoga and Saima** There is an excellent breed of horses. The climate is extreme, though generally milder than that of North Russia. June and July are sometimes very hot, but the winter is long and severe, the thermometer, even on the S coast, often sinking to 25° below zero (Fahr). Bog iron is found in considerable quantity in many of the lakes, and there are also deposits of tin, copper, gold, and silver. Manufactures are increasing, and include the products of saw-mills, iron works, machinery factories, distilleries, textile fabrics, and paper and leather works. Trade is mostly with Russia, after that country come Germany and Great Britain. Imports cereals, coffee, sugar, cotton and woollen goods, iron and iron ware, machinery, tobacco, chemicals, leather, oils, colours, exports timber, butter, paper, cardboard, textiles, hides, iron, tar, pitch. Area, 144,255 m. Pop 2,593,000.

**Finland, Gulf of**, an eastern arm of the Baltic, 260 m long and from 25 to 90 wide, shallow and brackish, frozen from 2 to 4½ months.

**Fiume**, a seaport of Austria-Hungary, at the head of the Gulf of Quarnero on the Adriatic, 35 m ESE of Trieste, largest ships can lie alongside the quays. Flour and rice mills, a petroleum refinery, and manufactures of naval stores, paper, chemicals, tobacco, starch, great transit trade with the interior. Imports from Britain and British colonies, iron (pig, bar, sheet), and hardware, cotton (goods and yarn), ships, coal, machinery, tin, tobacco, rice, jute, indigo, cotton (these few from India), and exports to Britain and British possessions, flour, oak extract, sugar, lumber, torpedoes, barley, starch, glue, beans, hemp, and sugar (the last to India and the E), from other countries come phosphates, wine (Italian for mixing), manganese, salt, and naphtha, and to other countries go oak staves (France), sugar (United States, Japan, and Italy), flour, beans (United States, France, and Spain)—the great exports are flour, sugar, and lumber. Of a total import of nearly £4,000,000 the United Kingdom has about 25 per cent, Austria-Hungary and Italy a little less, and Turkey about 12, of exports of over £6,000,000 the United Kingdom receives nearly 25 per cent, Austria-Hungary and France about 18, and Italy about 10. Of a total tonnage entered and cleared of 3½ million tons about 16 per cent are British bottoms, Austria-Hungary having about 77 per cent, but there is also a British carrying trade. Regular communication from Hull. British consul. Pop 39,000.

**Flamborough Head**, a promontory on the Yorkshire coast, England, 450 ft high with lighthouse, 214 ft above sea-level, visible 21 m.

**Fleetwood**, a seaport of Lancashire, England, near the mouth of the R Wyre, 21 m by rail N. W. of Preston, harbour with a

maximum depth of 15 ft at dock entrance at spring tides, daily communication with Belfast (120 m.), the Isle of Man (65 m.), and Drogheda (140 m). Imports cotton, wood-pulp, dye-wood, esparto grass, &c.; exports coal and general merchandise. Pop. 12,093.

**Flensburg**, the chief port of Schleswig-Holstein, Prussia, on an inlet off the Baltic, 19 m N of Schleswig, harbour 22 to 26 ft, but obstructed by ice in the early months of the year. Shipbuilding, machine works, breweries, copper and zinc works, &c., as well as fish-curing establishments. Imports grain, timber, coal, coke, iron, petroleum, salt, palm kernels, slates, rice, &c., exports bricks, draining tiles, beer, spirits, and oil. British vice-consul. Pop 49,000.

**Flers**, a town of the department of Orne, N France, 41 m by rail S of Caen, with linen and cotton spinning and weaving (fustian and ticking), and bleaching and dyeing factories. Pop 14,000.

**Flint**, a coast county, with a town of the same name, in N Wales, flat in N but elsewhere with low hills. Coal, iron, lead, zinc, copper, fire-clay, and barytes. The town is on the S side of the estuary of the Dee, 13 m by rail NW of Chester, has large alkali works, and exports coal and lead, harbour, vessels drawing 12 to 15 ft at high water. Area of county, 164,050 acres. Pop 81,725, pop of town, 4624.

**Florence**, chief town of a province of the same name, Italy, on the Arno, 194 m by rail NW of Rome, 1084 rail, &c., from London. Woollen and silk fabrics, straw-plait, jewellery, porcelain and majolica, glass flasks, mosaics, wood-carving, art works, &c. Letters, 2 days, parcels, 3. British consul-general. Area of province, 2265 m. Pop 938,000, pop of town, 205,000.

**Flores**, one of the Sunda Islands, in the Malay Archipelago, East Indies, S of Celebes, mountainous and covered with thick forests, exports timber, sandal-wood, cinnamon, tortoise-shell, and edible birds-nests. Area, 6025 m. Pop about 250,000. See also Azores.

**Florida**, the most southerly state of the United States, formed mostly by a peninsula between the Gulf of Mexico and the Atlantic, surface low, being nowhere more than 200 ft above sea-level, but with many swamps and lakes, and twenty navigable rivers, round the coast are many small islands. The climate is mild and equable, and there is a mean annual rainfall of about 54 in. Fruits and vegetables of all sorts, especially oranges and figs, are grown in great abundance, with cotton, tobacco, coffee, rice, and maize, there are also manufactures of tar, rosin, turpentine, naval stores, cigars, phosphates, and a trade in lumber and timber—oak, cypress, hickory, holly, satin-wood, lignum vitae, mahogany, &c., on the

coast are valuable sponge, oyster, and other fisheries Area, 54,240 m. Pop 529,000 The *Strait of Florida*, between the peninsula and Cuba and the Bahamas, through which flows the Gulf Stream, is 300 m long, from 50 to 100 wide, and from 2220 to 5070 ft deep

Flushing, the seaport of Holland nearest to Britain, at the mouth of the western Scheldt, on the S end of the Island of Walcheren The harbour is one of the very best in Europe, and is accessible at all times and seasons, the outer harbour has a depth of  $21\frac{1}{2}$  ft at low water, and  $34\frac{1}{2}$  at high water, and the docks have a depth of  $27\frac{1}{2}$  ft on sill at high water and 24 ft. inside Excellent rail, canal, and river, communication with Holland, Belgium, and Germany Active trade with England, the East Indies, and South America Communication twice daily with Queenborough, Kent (108 m, 8 hours), with mails for Holland and N Germany Imports general goods, exports agricultural produce, margarine, oysters, mussels, shrimps, &c British vice-consul Pop 19,000

Foggia, a province of S E Italy, with a town of the same name in the great plain of Apulia, olives, vines, fruits, flocks and herds The town, 76 m by rail N W of Bari, is centre of large trade in grain, wool, cheese, cattle, sheep, wine, and oil Area of province, 2688 m Pop 418,500, pop of town, 53,500

Fokien, or Fu-chien, a coast province of S E China, with treaty ports of Foochow and Amoy, which export the productions, *see* these, coal also Area, 47,000 m Estimated pop. 20,000,000

Fokshani, or Focsani, a town of Roumania, 123 m by rail N E of Bucharest, grain for Galatz Pop 24,000

Folkestone, a port of Kent, England,  $7\frac{1}{2}$  m W S W of Dover, with passenger and goods steamers once a day (summer twice) to Boulogne (30 m,  $1\frac{1}{2}$  hours), harbour dry at low water, but with depth then, at end of deep water pier, of  $16\frac{1}{2}$  ft., increasing at high water to 33 to 39 ft, herring and mackerel fishery. The chief imports (total £13,000,000) are silk manufactures (over £5,000,000), woollen manufactures (£1,300,000), leather, silk yarn, furs and skin manufactures, wine, cotton manufactures, gloves, fancy goods, ornamental feathers, artificial flowers, leather manufactures, fresh flowers, musical instruments, tobacco pipes, plums and cherries, paper and straw board, raw vegetables, poultry and game, watches and parts thereof, scientific instruments, joiners' work, woollen yarn, embroidery and needlework, boots and shoes, and eggs The chief exports of British produce (total over £1,000,000) are furs and skin manufactures, woollens, horses, and biscuits and bread Pop 30,694

Foochow, a Chinese seaport in the province of Fokien on the River Min, 34 m from its mouth, anchorage 9 m. down the river, large

transit trade with the interior Imports opium (India), cotton shirtings, T-cloths, drills, and jeans (British), cotton yarn (India and Japan), camlets and other woollens (British), tin, lead, petroleum, silk (largely native from other districts), tea (transit), coal, beans, bêche-de-mer, fish (dried and salt), flour, ginseng, hemp, indigo, sugar, tobacco, and wheat Of imports of less than £800,000 from foreign countries, Britain sends over 87 per cent, and a match factory established by British capital is doing a large trade Exports black tea and black brick tea, dried bamboo, wood poles and petroleum-oil cases, mushroom, oranges, paper, and joss paper Of about £900,000 sent to foreign countries, Britain receives over 60 per cent. A large amount of the imports from abroad comes through Hong-Kong, but most of the exports go direct. Of a total tonnage, entered and cleared, of more than 700,000 tons, over 70 per cent were British Regular communication from London Distance from London, 10,240 m, Liverpool, 10,165, Glasgow, 10,275, Cardiff, 10,060 British consul Pop estimated at 600,000

Foreland, North, and Foreland, South, two headlands at the N E and S E extremities of Kent, England, 16 m distant from one another, with chalk cliffs 200 to 300 ft high The lighthouse on the first has its light 188 ft above sea-level, and visible 20 m away, and the second has double lights, 275 and 380 ft. up, visible 22 and 25 m respectively

Forest of Dean, a district of W Gloucestershire, England, about 34 m in extent, between the estuary of the Severn and the Wye It is very rich in coal, and has also iron, stone suitable for grindstones and rollers, &c, and extensive coppices of oak, beech, &c

Forfar, a coast county of centre east-Scotland, on the north side of the Firth of Tay, with a chief town of same name The county has alternate strips of hill and plain, including the rich districts of Strathmore and the Carse of Gowrie, the Sidlaw Hills with sheep walks, and the Braes of Angus with grouse moors and deer forests, highest point over 3500 ft; drained by N and S Esks and tributaries; fishing on coast; the chief industries are the manufacture of jute and coarse linen at Dundee, Montrose, Arbroath, &c The town, 13 m by rail N E of Dundee, has manufactures of coarse linen Area of county, 559,171 acres Pop 284,082, pop of town, 12,061

Formosa, or Taiwan, an island belonging to Japan, off the province of Fokien in S E China, and separated from it by the Fokien Strait (Pescadore Strait, portion next Chinese coast). Formosa Strait, portion next Formosa; greatest length, 235 m greatest breadth, 109 m; central mountain chain reaching a height of over 12,500 ft.; hills in E half rise in W In the hilly districts the rainfall is 100 in., the rest

mean temperature ranges from 50° to 90° Fahr., extensive coal deposits, and sulphur and gold. The island is rich in vegetable products, and since it passed from China to Japan in 1895 the trade has been rapidly improving, though it is still hampered by bad harbours and poor communication. The last is being improved and railways made. The staples of Formosa are camphor, tea, salt, sugar, and rice, and of these camphor, salt, and the trade in imported opium are government monopolies. All the staples are exported (the tea being sent to Amoy for the London and United States markets), and also camphor oil, hemp, flax, jute, coal, hides (water buffalo skins sent to Japan), and turmeric. The chief imports are opium (Persia and India), kerosine (America four-fifths, and Russia one-fifth, but N. Borneo and Sumatra have begun to come into the market), grey and white shirtings, nankeens, sateens, camlets, lasting, grass-cloth and grass and cotton mixed, cotton and woollen piece goods (from other parts of Japan), machinery, railway material, fish (other parts of Japan and China), rice (other parts of Japan), beans, beer, cement, tobacco, and sake (all five from other parts of Japan), joss paper, Japanese matches, Japanese sauces, timber (other parts of Japan), and pigs (other parts of Japan). The northern ports, of which Kelung and Tamsui are the chief, have imports of the value of over £3,000,000 (other parts of Japan as above over £700,000), and exports worth over £1,000,000 (to other parts of Japan nearly £300,000), but better harbours would probably increase the amount of trade. Of shipping in the foreign trade, of over 250,000 tons more than 30 per cent are British, and the bulk of the rest Japanese and Chinese. At Tainan and other southern ports the imports are valued at over £400,000, and the exports at over £350,000, and of the shipping of nearly 400,000 tons, 7 per cent are British and the bulk of the rest Japanese. Kelung is about 135 m from Foochow and 630 from Nagasaki, and Tainan is about 150 from Amoy. Telegrams, 6s a word *via* Turkey; 6s 2d. by other routes. Area, 13,458 m. Pop 2,640,500.

**Forst**, a town of Brandenburg, Prussia, 80 m by rail S E of Berlin, with manufactures of cloth, leather, and machinery. Pop 32,000.

**Forth**, river of S E Scotland, navigable for vessels of small size to Stirling, length, 70 m, basin, 628 m. At Alloa (which can be reached by vessels of 300 tons) the river merges in the Firth, which stretches from this point over 50 m. E to the North Sea at a line from Fife Ness to St Abb's Head, and which has good fishing ground. The width at Queensferry is 3 m, at Leith, 6, between Elie and North Berwick, 8, and across the mouth, about 30, and the depth varies from 3 to 37 fathoms. At

Queensferry the Firth is crossed by the Forth Bridge of the North British Railway, with two great cantilever spans of 1710 ft each, an entire length of 8296 ft, a railway line 150 ft above the level of the sea, and huge steel towers reaching an extreme height of 370 ft above high-water mark.

**Forth and Clyde Canal**, between Forth at Grangemouth and Clyde at Bowling, 35 m long, and taking vessels up to 8½ ft., branch 4 m. along the N side of Glasgow.

**Fort Wayne**, a town of Indiana, United States, on the Erie and Wabash Canal, 148 m S E of Chicago, railway centre, and manufactures railway carriages, engines, woollen goods, organs, &c. Pop 45,500.

**Foss Dyke**, a drainage and navigation canal in Lincolnshire fens (Bedford Level), England, connecting Trent and Witham near Lincoln, takes barges up to 5 ft.

**Fowey**, a town of Cornwall, England, on the River Fowey, 10 m by rail S S E. of Bodmin, depth of harbour ranges with the state of the tide from 18 to 26 ft. Imports general goods, exports china-clay, granite, iron ore, and cured pilchards. Pop 2000.

**Foyers**, a small stream of Inverness-shire, Scotland, on E side of Loch Ness, with fine falls, which are used for generating electricity for the manufacture of aluminium from bauxite brought from Ireland and elsewhere.

**Foyle**, Lough, an inlet on the north coast of Ireland, 18 m. long, and from 1 m (at the entrance) to 10 m. broad, navigable on W side, up which and the river as far as Londonderry vessels drawing 23 ft can make their way. Transatlantic steamers on the way out call for mails at Moville, 17 m down from Londonderry.

**France**—*Surface and Size*—France is a republic of south-western Europe, occupying about one-nineteenth part of the area of that continent, and with about one-eighth of the population. It lies (exclusive of Corsica) between 51° 6' and 42° 20' N, and between 4° 42' W and 7° 39' E, and is bounded N E by Belgium and Germany, E by Germany, Switzerland, and Italy, S by the Mediterranean and Spain; W. by the Atlantic (Bay of Biscay), and N W by the English Channel. The greatest length from N. to S is about 600 m, the greatest breadth from E to W about 550, from N W to S E about 680, and the area 204,092 m. The north and west of the country is flat, almost nowhere over 600 ft above sea-level, but with small hilly parts in Brittany and Normandy (with Alençon as a centre), and to the S E of Nantes (Hauteurs de la Gâtine). In the south centre is the great plateau of Auvergne, 200 m long and wide, with an average elevation of some 3000 ft, and with a number of extinct volcanic cones (Puy de Dôme, Mont Dore, &c.) rising above it to

heights of 5000 to 6000 ft—highest Mont Dore (6182), the S E part is the Cevennes, which are continued northward by the mountains of Charollais, the Côte d'Or, and the Plateau of Langres, from which the Monts Faucilles are sent off across the Upper Moselle to meet the Vosges. Along the E. of this line of mountain ranges is the valley of the Lower Rhone and the Saône, extending over 300 m from N to S, and E of the valley, N of the Doubs, are the Vosges, between the Doubs and the upper Rhone, the Jura, and between the upper Rhone and the Mediterranean, spurs of the Graian, Cottian, and Maritime, Alps, reaching heights of 13,000 to 15,000 ft (Mont Blanc, 15,780). The opening between the Vosges and the Jura is traversed by the Rhone and Rhine Canal, and by the railway from Besançon to Mulhausen. The passage between the Côte d'Or and the Plateau of Langres is crossed by the Burgundy Canal connecting the Seine basin and the Saône, and by the railway from Dijon by the valley of the Yonne to Paris; and that between the Côte d'Or and the Mountains of Charollais by the Canal du Centre, joining the Loire and Saône, and by the railway from Dijon by Digoin and the Loire valley to Orleans, while across the Plateau of Langres itself is the railway from Besançon to Chaumont, &c., linking the Saône valley with those of the Upper Seine, the Marne, and the Meuse, and across the Monts Faucilles are the lines to Vesoul and Épinal and the valley of the Moselle. At the S end of the Cevennes is the narrow hollow of Naurouse (620 ft.), through which passes the Canal du Midi (joining the Garonne basin with the Mediterranean), and the railway from Toulouse, joining the Mediterranean coast-line at Narbonne. To the S of this curious passage, so convenient for the communication between the Atlantic and the Mediterranean, rise the foot-hills of the eastern Pyrenees, and thence westward this range stretches all along the frontier with Spain, reaching heights of over 11,000 ft. In the S W., along the coast between the Garonne and the Adour, is the great plain of the Landes, with its coast-line of sand dunes hemming in great lagoons, and its surface of sand hardened in many places into a crust on which vegetation is impossible. As will be evident from the surface lie, the drainage is mostly to the English Channel and the Atlantic, the chief rivers flowing to the former being the Somme, Seine (with its great tributaries the Oise, Marne, Aube, and Yonne), and Orne, and to the latter the Vilaine, Loire (with its tributaries the Sarthe—made up of the Mayenne, Sarthe, and Loir—Allier, Cher, Indre, and La Creuse-Vienne), Charente, Dordogne (with Dronne-Jelle, Vézère and Corrèze), Garonne (with Lot, Aveyron-Tarn, Aveyron, and Ger.), and Adour. Along the N E.

are parts of the courses of the Meuse and Moselle and their tributaries, while along the E and S E are the long line of the Rhone and Saône (with the tributaries Doubs, Ain, Isère, Drôme, and Durance), Hérault, Aude, and Tet. The rainfall over the greater part of the low ground is from 20 to 30 in, rising as it approaches the higher ground, and increasing still more among the mountains. The temperature varies very considerably with the latitude, but the mean winter temperature may be taken as about 42° Fahr, and that of summer as about 68°, a little colder in the north and warmer in the south in both cases.

*Government, &c*—France is a republic, with a president elected for seven years by a majority of votes in a National Assembly formed of the Senate and Chamber of Deputies united. The legislative power is vested in a Chamber of Deputies and a Senate. The population numbers almost 39,000,000, of whom over 45 per cent are connected with agriculture, 24 with various industries, and 10 with commerce. There are many small holdings, the total number of landowners being probably about 6½ millions, of whom some 68 per cent are proprietors of fewer than five acres, and nearly 86 per cent of fewer than 15 acres.

*Communications*—For external communication France has the advantage of a long coast line, but only on the Brittany coast and on the eastern part of the Mediterranean coast are there good natural harbours. On the former Brest has taken advantage of its opportunities, and along the latter the roadstead of Hyères, Toulon, and Marseilles—one of the great ports of the world—are very important, because they command the routes from the Mediterranean to north-western Europe. Elsewhere the approaches are difficult owing to shallow water and unbroken outline, but the demands of trade with the United Kingdom and over-sea have led to the formation at Havre and elsewhere of artificial harbours of considerable size, while the mouth of the Loire and the mouth of the Garonne (Gironde) form natural trading centres on the Bay of Biscay coast, where also the ports of La Pallice and La Rochelle are of value. The country has also the benefit of an excellent river and canal system, especially in the N. where the surface is flat, and the water-ways linking the basins of the Seine, Somme, and Scheldt are particularly suited for heavy traffic. Besides the lines of canal communication already mentioned, note may be made of that connecting the Seine basin with that of the Rhine and the Marne. There are now over 1100 m of river actually navigated, and over 2000 m of canals, besides 1816 m. of river fit for rafting. During the last twenty years the Government has spent some £18,000,000 in improving its old water-ways, besides giving up the tolls. The chief works were the deepening of the

1000 ft, and hilly in N and W., drained by Moselle, Sauer, and Alzette, wheat, flax, hemp, rape-seed, and wine, very large deposits of iron ore, especially near the southern frontier about Esch, with an output of 6,000,000 tons; lead, antimony, copper, alabaster, blast-furnaces, puddling and steel works The chief town Luxemburg, on the Alzette, is 42 m by rail N of Metz, and has manufactures of leather gloves, woollens, linens, and cottons, and trade in iron. Postage letters, 2½d per half-oz, postcards, 1d, parcels under 3 lbs, 1s 3d, between 3 and 7, 1s 8d., between 7 and 11, 2s, telegrams, 2½d. a word, money orders exchanged, mails to and from London thrice daily Area of grand-duchy, 998 m Pop 236,543., pop of town, 21,000

**Luzon.** See Philippines

**Lydenburg**, a town in the NW of the Transvaal Colony, South Africa, 48 m NE of Machadodorp which is by rail 161 m ENE of Pretoria, the only rich alluvial goldfields in South Africa are in this district, quartz mining also Pop. 800

**Lye and Wollescote**, an urban district in Worcestershire, England, close to Stourbridge, with coal mines and manufactures of anvils, vices, fire-bricks, &c Pop 10,972

**Lynchburg**, a city of Virginia, United States, on the James River, 124 m by rail W by S of Richmond, staple industry tobacco manufacture, coal and iron, cotton mills, iron foundries, fruit-canning establishments, and manufactures of agricultural implements, nails, furniture, &c Pop 19,000

**Lynn**, or **King's Lynn**, a seaport of W Norfolk, England, on the Wash, at the mouth of the Great Ouse, 99 m N by E of London, large harbour with depth of 10 ft at low water, docks with depth on sill of from 18 ft. at high water of neaps to 25 ft. at high water of springs, and a deep channel to them from a very safe anchorage in Lynn roadstead, sends great quantities of shrimps to London. Imports sugar, maize, barley, timber, oil-cake, cotton seed, flax and linseed seed, phosphates, and iron and copper pyrites; exports coal and coal products, oil-seed, manure, &c Pop 20,289

**Lynn**, a seaport of Massachusetts, United States, on Massachusetts Bay, 10 m. NNE of Boston; tanning, and manufactures of ladies' and children's boots and shoes Pop 68,600

**Lyons**, or **Lyon**, a great city of SE France,

the chief town of the department of the Rhône, at the junction of the Saône and the Rhone, 218 m by rail N by W. of Marseilles, and 315 SSE of Paris, the great European centre of the silk industry—manufacture, dyeing, and printing It has also important chemical industries (dyes, soap, &c.), and manufacture of iron, machinery, brass, leather, starch, fancy goods, gold and silver ware, mathematical instruments, and paper In the considerable chemical industry, German competition is telling, especially in the hydro-carbides, benzol, toluol, xylol, carbolic acid, aniline dyes, and intermediate coal-tar products Raw silk is imported, and the finished article exported, largely to Great Britain and the United States The silk production is valued at some £17,000,000, and the export at over £10,000,000. A considerable amount of raw silk is sent from Bengal, and with due care in production, and proper organisation for placing it on the market, the quantity sold at Lyons could be materially increased From its situation at the meeting point of important road and rail routes from Dijon (N), Geneva (NE), Turin (E), Rhone Valley (S), St Etienne with its coalfield (SW), and Roanne and the Loire (NW), Lyons holds a commanding position for a large transit commerce between central and southern Europe, and a busy trade is carried on in raw cotton (imported from Egypt and America), linen, woollen cloth, coal, charcoal, wines and spirits, cheese, chestnuts, &c., as well as in the products of the place and district. Distance from London, by rail, &c, 609 m British vice-consul Pop 459,000

**Lyttelton**, a seaport of the Canterbury district, on the inlet of Port Lyttelton (8 m. long and 1 wide), near the centre of the E coast of the S Island of New Zealand, connected with Christchurch (7 m W.), of which it is the port, by a short railway, vessels up to 27 ft. can lie alongside the wharves, and the depth inside the two great breakwaters varies from 19 to 27 ft, graving dock 450 ft. long with 23 ft. on sill, cold storage chambers, imports valued at £2,000,000, and exports at over £3,400,000, imports general goods, exports wool, grain, frozen meat, fruit, skins, hides, &c Regular communication with London, Liverpool, Nelson, Wellington, and Dunedin Distance from Wellington, 174 m; Dunedin, 190 Pop 4100

## M

**Maassluis**, a fishing village (herring) of Holland, on Maas, 11 m W. of Rotterdam British consular agent.

**Maastricht**, or **Maestricht**, the chief town

of the province of Limburg, Holland, on the left bank of the Maas, 19 m by rail NNE of Liège, and 152 m SSE of Amsterdam, good river and canal communication, coal in neigh-

bourhood; making of glass, earthenware, carpets, and paper. Pop 34,500

Macao, a port belonging to Portugal on a rocky peninsula on the island of Heang-shan at the mouth of the Canton River, Kwangtung, China, some 40 m. W of Hong-Kong, peninsula,  $2\frac{1}{2}$  m long by barely 1 m wide, forms at inner end a large landlocked harbour with 12 to 18 ft at low water near shore, large vessels anchor 5 or 6 m out, suffers much from typhoons, transit trade largely, in fact almost entirely, in hands of Chinese, silk factories, imports valued at about £8,000,000, exports at about £6,000,000, the foreign export being mostly in the hands of British houses, opium from India imported raw, prepared, and re-exported to Chinese in San Francisco and Australia, other imports, kerosene (American and Russian), piece goods and yarn, rice, indigo, and general goods, large transit export of tea (the amount sent to London alone being estimated at 2,500,000 lbs), and export of tobacco, preserves, and essential oils. Daily communication by steamer with Hong-Kong and Canton, distance to Canton, 88 m. Telegrams, *via* Turkey, 5s 7d a word, other routes, 5s 9d. British vice-consul Area,  $4\frac{1}{2}$  m. Pop 79,000, of whom 75,000 are Chinese, 3900 Portuguese, and 160 from European countries other than Portugal (80 British).

Macassar, the chief town of the district of same name, in S.W. of Celebes, with a trade of £1,000,000 a year, one of great ports of East Indies, sheltered from S.E. winds, depth at entrance 50 to 60 ft, and of anchorage close to shore 30 to 60 ft, with 24 ft at quays. Imports textiles and general goods, exports coffee, gum, shells, spices, tortoise-shell, cajuput oil, hides, horns, &c. Pop 20,000. The *Strait of Macassar*, between Borneo and Celebes, has a width of from 85 to 155 m.

Macclesfield, a town of Cheshire, England, on Bolln,  $17\frac{1}{2}$  m by rail S.S.E. of Manchester, and 160 N.W. of London, former twist and silk button trade extinct, but extensive manufacture of silk, also weaving of cotton and smallwares, and bleaching and dye works, coal in neighbourhood, has connection by Macclesfield Canal (26 m) with Trent and Mersey Canal. Pop 34,635.

Maceio, the chief town of the state of Alagoas, Brazil, on a peninsula between the Lagoa do Norte and the sea, 125 m S.W. of Pernambuco, railway lines (two) give communication with the interior, roadstead with depth varying from 16 ft at low, to 35 ft at high, water. Imports general merchandise, exports sugar, cotton, cotton seed, maize, and hides, sugar, nearly all to United States, manufactures cotton. Of over 200,000 tons, entered and cleared, about 20 per cent. are British. British vice-consul. Pop 15,000.

Mackay, a port of E. coast of Queensland,

Australia, on S. bank of Pioneer River, 625 m N.W. of Brisbane, coal in neighbourhood, extensive sugar district around, outlet for Mount Orange and Mount Gotthard copper mines and for Mount Britten, Eungella, and Yatton gold districts, greatest depth of 20 ft on bar at high water of ordinary spring tides, wharves take vessels of 12 ft, but sheltered roadstead 5 m out has 30 ft. Pop 4100.

M'Keesport, a town of Pennsylvania, United States, on the Monongahela, 15 m by rail S.E. of Pittsburgh, with important iron and steel manufactures, rolling mills, tube works, glass works, &c, natural gas providing part of the fuel employed. Pop 34,500.

Mackenzie River, one of the great streams of N.W. Canada, having a course of nearly 1100 m from the Great Slave Lake to the Arctic Ocean, and if the Athabasca (600 m) and Slave River (240 m), which are really its upper waters, be added, it has a course of some 2500 m and a basin of 600,000. The mouth is frozen from October to June, but during the rest of the year the river is navigable for light-draught steamers. There are considerable deposits of lignite, and some coal, along its course, and the upper part of the basin has enormous stores of petroleum, and fertile land. The Mackenzie Territory of N.W. Canada, to which the river gives name, is bounded N. by the Arctic Ocean, W. by the limit of the Mackenzie basin, S. by the parallel of 60° N, and E. by the meridian of 100° E. It has an area of about 250,000 m.

Mâcon, chief town of department of Saône-et-Loire, France, on right bank of Saône, 40 m by rail N. of Lyons, agricultural and vine district, famous for a variety of light Burgundy wine, manufactures of earthenware, brass, &c. Pop. 19,000.

Macon, a town of Georgia, United States, 100 m S.E. of Atlanta, great railway centre, sends out cotton, and has cotton, flour, and lumber, mills, foundries, and manufacture of railway plant. Pop 23,500.

Macquarie Harbour, chief seaport on W. coast of Tasmania, on an inlet of the same name 20 m long, 229 m from Hobart, railway communication (24 m) inland, gold and silver-lead in district. Pop of town, 1500, of district, 10,500.

Madagascar, a large island off the S.E. coast of Africa, from which it is separated by the Mozambique Channel (230 to 600 m wide, and 2000 fathoms deep). Madagascar lies between 12° and 25° S and between 43° and 51° E with a length of some 975 m, an extreme width of 360, and an area of about 228,000. The interior is rugged, with mountains and mountain chains rising to from 3000 to 5000 ft, sloping down on both sides (on the E much more abruptly than on the W) to low ground some 600 ft. above sea-level. Between the mountain ranges

are plateaux, and the highest part of the island is near the centre—Ankaratra (9000 ft.), which is probably an extinct volcano. The coast regions are somewhat unhealthy, and owing to the influence of the S E trade wind, which is constant from April to November, the rainfall on the E side (average some 70 in) is about double that on the W. The vegetation is luxuriant, a belt of tropical forest extending round the whole island with a breadth of from 10 to 40 m, and there are other forest regions in the centre and N, while the southern plateaux are grassy. The most valuable trees are bananas, cocoa-nuts, orange and mulberry trees, the raphia-fibre and areca palms, pandanus, acacias, and ebony, and caoutchouc, cotton, hemp, rice, manioc, coffee, cacao, vanilla, tobacco, and sugar-cane are produced. The minerals include gold, copper, iron, lead, nitre, salt, sulphur, plumbago, and lignite, and though some of the deposits are probably of considerable value, little has so far been done for their development, as, under native rule, previous to the annexation of the island by France in 1895-96, mineral exploration was practically prevented. The people are mostly engaged in the rearing of cattle, sheep, and pigs, and there is a little agriculture, and weaving of silk, cotton, and raphia-fibre fabrics on hand looms. Of imports valued at about £1,500,000 (including textiles, general goods, colonial products, metals, and metal and woodwork) the bulk comes from France, only some 3 per cent being from the United Kingdom, and 1 from Germany. Of exports valued at under £400,000, gold and gold dust (about one-third), raphia, caoutchouc, cattle, hides, wax, and vanilla, about two-thirds go to France, 8 per cent to the United Kingdom, and 12 to Germany. The imports to the United Kingdom from Madagascar are mostly rubber, and hemp and other fibres, the exports to the island cottons, coal, and iron. The French are opening up roads, and have begun to construct railways. Antananarivo, the native capital, is on a lofty plateau near the centre of the island, pop about 50,000. The chief ports are Tamatave near the centre of the E coast, and Majunga or Mojangon on the N W. The former has a good anchorage, safe from April to November, pop 15,000. Regular communication from London. Mails from and to London every fortnight, postal rates as for France, parcels, under 3 lbs, 3s, between 3 and 7, 3s 6d, between 7 and 11, 4s, telegrams, 3s 8d. Majunga has also a deep good anchorage. Pop 6000. British consuls at Antananarivo and Tamatave. Pop 2,215,000, of whom 2,243,000 are natives, 1200 French, 374 British, and 33 Germans.

Madeira, the largest of a small group of islands (including also Porto Santo 23 m N E and the three uninhabited Desertas 11 m S E) belonging to Portugal, in the N Atlantic, 32½° N and 17° W, 390 m from N W coast of Africa, 530 W S W of Lisbon, 256 N of Tene-

riffe, and 1164 from the Lizard. An oval some 38 m long, 15 m extreme width, and with an area of 270, it rises in the central mountains to a height of over 6000 ft. The temperature ranges from a minimum of 50° Fahr to an average maximum of 80°, and the heat is moderated by the wind which blows from the N and N E for nine months of the year, and though the rainfall is over 29 in, four days out of every five are absolutely dry, while whole wet days are very few in number. Snow falls on the higher ground, but never comes below 2200 ft. The place is consequently a health resort, especially for persons with weak lungs. Vine, sugar-cane, tobacco, and, with the aid of irrigation, great supply of fruit and vegetables (peas, French beans, cauliflowers, onions, &c) for the London market. Regular communication from London, Liverpool (6 days), Southampton (4). Mails weekly, letters, 4 days, postage as for Portugal, parcels, under 3 lbs, 2s, between 3 and 7, 2s 6d, between 7 and 11, 3s, telegrams, 1s a word. British consul. Pop 151,000.

Madeira, the greatest tributary of the Amazon, from the S, with a total length of over 3000 m, and a basin of some 450,000 m, navigable over a large part of its course, except for about 230 m some 600 m from mouth. A railway of about 170 m would enable goods to pass from the upper to the lower reaches, and prove a valuable outlet for Bolivia.

Madras, a presidency and administrative division of India, extending along the E coast S of Lake Chilka, and to the S of the River Kistna and its tributary the Tungabhadra occupying the whole width of the peninsula. The low coastal strip on each side rises by the Eastern and Western Ghats to the great central tableland, sloping up from 1000 to 3000 ft. The Ghats meet in the Nilgiris, and farther S are the Cardamom Hills and their offshoots. The climate is very variable, but on the E coast the rainfall (N E monsoon, October to middle of December) is over 40 in, and the mean temperature over 81° Fahr, while on the W coast (S W monsoon, June to October) the fall rises in some places to over 130 in, with a mean temperature (pretty persistent) of about 80°. The Palghat Gap, S of the Nilgiris, allows the S W monsoon to blow inland to a considerable distance, carrying rain with it, but the rainfall in the interior is seldom above 30 in and is in many places below 20. The drainage is carried off by the Godavery, Kistna, and Cauvery, their tributaries, and smaller streams, and all over the district a great deal of water is stored, there being a very complete system of irrigation providing for 6½ million acres. The rivers are of no use for navigation, but there are excellent roads and very important railway communications. Rice, millet, and pulse are extensively grown, and there are large crops of cotton (on the tableland and drier districts), tobacco (1 rich-

nopoly cigars and cheroots) towards the S, ground-nuts, oil-seeds, indigo, sugar-cane, spices, cocoa nuts, arca nuts, and date palms. On the hills tea, coffee, cinchona, and cardamoms are grown. There are manufactures of cotton, gunny bags, sugar, and paper. There are valuable teak forests, and gold is found in the Wynnad district in the Western Ghats, and good iron ore is worked on a small scale in the Salem district (centre S), but want of fuel prevents development. Salt is obtained by evaporation along the coast. Area, exclusive of native states (9969 m.), and of Coorg (1583 m.), 141,726 m. Pop 38,209,500, of native states, 4,188,500, and of Coorg, 181,000. The great bulk of the people are Hindus, but there are about 2,500,000 Mohammedans and over 1,000,000 Christians.

**Madras**, the chief town of the administrative division just described, on the E coast. There is always a heavy surf, and in the end of May and the beginning of June, as well as in October, November, and the beginning of December, there are often disastrous cyclones. Ships moor inside the harbour in 6 to 7 fathoms, but it is doubtful whether works will ever render shipping safe, though passengers have no longer to face the disagreeables of being transferred from steamer to shore or vice-versa in surf-boats. The climate is healthy, the rainfall being about 50 in, and the heat, though rising at times to over 100° Fahr, is often tempered by a sea breeze. Imports cotton, hardware, and general manufactured goods and provisions, exports cotton, coffee, tea, sugar, cocoa-nut sugar, indigo, rice, hides and horns, cocoa-nut oil, and oil seeds. The total trade is valued at about £11,000,000, the exports being valued at rather more than the imports. Regular communication from London and Cardiff. Letters, 17 days, parcels, 27. Distance from London, 7350 m., Liverpool, 7270, Glasgow, 7380, Tyne, 7630, Colombo, 620, Calcutta, 770, Rangoon, 1025, Penang, 1275. Pop 509,500.

**Madrid**, the capital of Spain, in the province of the same name, on the River Manzanares, in the centre of the country, in the midst of a great barren sandy plateau over 2100 ft above sea-level, climate one of extremes and very unhealthy, manufactures (gold, silver, and iron, work, tapestry, pottery, tobacco, furniture, &c.) of only local importance. Letters, 2 days, parcels, 4. Distance from London (rail, &c.), 1168 m. Time for noon at Greenwich, 11 45 A.M. British vice-consul. Pop 512,500.

**Maestricht** See Maastricht

**Mafeking**, a small town in the N.E. corner of Griqualand West, Cape Colony, close to where the boundaries of Cape Colony, Bechuanaland, and Transvaal Colony meet, 870 m. by rail N.N.E. of Cape Town. Famous as the starting point of the Jameson Raid (1895), and for its defence for 217 days (from 12th October 1899 to

17th May 1900) under Colonel Baden-Powell in the Boer War of 1899-1902. It must, from its position, have considerable importance as a collecting and distributing centre. Under the South African Customs Union Convention it has the right of Free Warehouse, and goods for the interior can be procured from the bonded stores under rebate. The district is said to be suitable for olives.

**Magaliesberg Mountains**, a range in the Transvaal curving W. and N.W. from Pretoria, N. of the Witwatersrand; iron ore.

**Magdalena**, a great river of Colombia, South America, flowing to the Caribbean Sea, mouth obstructed by shifting bar, and consequently there is transport by rail from Sabanilla, on coast to W., for 18 m. to Barranquilla on the river, beyond which navigation is possible for nearly 900 m. of a total course of 1100, steamers ascend 600 m.; area of basin, 96,000 m.

**Magdeburg**, the chief town of Prussian Saxony, on the Elbe, 88 m. by rail S.W. of Berlin, and 70 N. of Leipzig, great railway and river centre, with an enormous trade in sugar, considerable dealing in grain, and manufactures of iron, cotton, spirits, chemicals, artificial manures, &c. Pop 230,000.

**Magellan Strait**, of extreme S. of South America, between Tierra del Fuego and the mainland, 350 m. long by 2½ to 17 m. wide, but mostly over 12, shore of eastern part low and grassy, of western part wooded mountains rising steeply from water, strong current, excellent route for steamers, but the narrow winding passage and strong W. winds are against sailing vessels, and there is danger from sunken rocks. Punta Arenas, a calling place for ships, has coal.

**Mahmudieh Canal**, in Lower Egypt, formed in 1820 for access to Alexandria from the Rosetta mouth of the Nile.

**Maidstone**, the county town of Kent, England, on the Medway, 41½ m. by rail E.S.E. of London, and 8 S. of Rochester, hop and agricultural centre, paper mills and making of wall-papers, oil mills, and breweries. Pop 33,516.

**Main**, the largest tributary of the Rhine from the west; rises in N.E. Bavaria, and has a course of over 300 m., and a basin of nearly 11,000, navigable for over 200 m. by means of locks, and canalised over the 20 m. from Mayence to Frankfort so as to take vessels of 1000 tons, has communication with upper Danube at Kelheim by Ludwig's Canal.

**Maine**, the extreme N.E. of the United States and of the New England States, lying along the Canadian border, coast of 2500 m. if all the inlets be followed, surface undulating (Appalachians 5300 ft); many minerals, but little worked, forests all over north producing timber, bark, and maple sugar, wheat, oats, maize, apples, and dairy produce, condensed milk, export of ice, cod, mackerel, lobster,

and herring, fishing, manufactures of boots and shoes, cottons, lumber and timber products and carpentry, woollens, paper and wood-pulp, canning of fish (sardine-herring and clams), Indian corn, blueberries, beans, squash, pumpkins, apples, and tomatoes; flour and grist milling, foundry and machine shops, ship and boat building, and tanning and currying Area, 29,895 m Pop 694,500

**Maine-et-Loire**, a department of W France, lying along both sides of the lower Loire; flat or undulating, coal and slate, vine, hemp, and flax, manufactures of cottons, woollens, and linen Area, 2749 m. Pop 515,000

**Mainz** See Mayence

**Majorca**, the largest of the Balearic Islands, belonging to Spain, in the Mediterranean, 140 m E of Valencia, 60 m long by 40 broad; surface mostly flat, but rising to ridge on N W of some 5000 ft., fertile soil with vines, olives, almonds, oranges, and figs, local manufacture of cottons, woollens, &c., short railway (48 m) from Palma to Manacor Palma, on S W coast, the chief town, has a considerable trade, breakwater with depth up to 30 ft British vice-consul Pop 62,500. Area of island, 1350 m Pop 260,000

**Malacca**, one of the Straits Settlements, on the W coast of the Malay Peninsula, near the S. end, 110 m N W of Singapore, and 240 from Penang The territory is about 42 m long by from 8 to 25 wide, and has an area of 659 m, coast low and marshy, rising inland to low round hills, rice, tapioca, fruit, pepper, iron, gold, and tin The town, with the same name, near the centre of the coast, has an anchorage with a depth of 8 to 10 fathoms 2 m off shore, imports textiles and general goods, exports tapioca, rice, and spices, gold and tin mining, at one time of importance, no longer pay, total value of trade, almost equally divided between imports and exports, about \$1,000,000 Telegrams, *vid* Turkey, 3s 4d a word, other routes, 3s 6d Population of territory, 95,500, of which about 80 are whites, of town, about 20,000 The *Straits of Malacca*, separating the Malay Peninsula from Sumatra, and connecting the Indian Ocean and the Chinese Sea, is about 480 m long, and from 30 to 190 wide, with very strong currents

**Malaga**, a province of S Spain, on the Mediterranean, with a chief town of the same name, mountainous, iron ore, graphite, manganese, lead (from Linares), copper, &c., but difficulties of transport hinder their being worked in quantity, except the iron at Marbella and Estepona on the W, grapes, oranges, lemons, almonds, figs, olives, cotton, and sugar-cane The town, 65 m. N E of Gibraltar, has a harbour with 30 ft at entrance and 23 ft at quays; imports coal, cotton and cotton-yarn, guano, machinery, iron and steel and iron and steel ware, dye-stuffs, and general goods; exports olive-oil, wine,

raisins, grapes, almonds, oranges, lemons, figs, esparto, chick-peas, anchovies, lead, &c.; of over 1,000,000 tons, about 16½ per cent. are British, the bulk of the rest Spanish, imports and exports valued at over £2,250,000, the former nearly £2,000,000, cotton and linen weaving, iron founding and machinery, manufacture of tobacco, &c. Regular communication from London Letters, 3 days Distance from London, 1376 m, Liverpool, 1300, Glasgow, 1400, Tyne, 1650, Cardiff, 1200 British consul Area of province, 2824 m Pop 485,500, pop of town, 126,000

**Malay Peninsula**, a long narrow projection extending from Indo-China southward towards Sumatra, and forming the extreme S of the mainland of Asia Properly it extends from the head of the Gulf of Siam with a length of some 900 m, a width varying from 45 to 210, and an area of some 75,000 m, of which over 35,000 are British The whole peninsula is traversed by a mountain chain (reaching a height of 7000 to 8000 ft, but becoming gradually lower to the S) which is one of the great tin-producing districts of the world (more than half total production), gold and silver are also worked, and coal and iron are found There are magnificent forests, with ebony, camphor, teak, sandal-wood, cinnamon, bamboo, cocoa-nut and areca nut palms, sago, gutta-percha, coffee, tea, tapioca, nutmegs, pepper, cloves, &c. The northern part belongs to Britain on the W. coast, to Siam on the E, the centre is Siamese as far S as 4° on the E and 5° 30' on the W, and in the S are British territories and protected states See Straits Settlements

**Malden**, a town of Massachusetts, United States, 5 m. by rail N of Boston with manufactures of india-rubber goods, blind cord and tassels, sand-paper, &c Pop 34,000.

**Malden**, a small island (5 m by 4) in the S Pacific, 4° S and 155° W, with valuable deposits of guano, British since 1864

**Maldivé Islands**, a chain of 19 coral atolls (about 250 inhabited islands) extending over a length of 550 m, with an average width of nearly 50 m, to the W of Ceylon, from which their centre is distant about 500 m, import textiles, rice, dates, salt, &c., export bonito-fish, tortoise-shell, cocoa-nuts, coir and copra, and cowries Pop probably about 30,000

**Maldon**, a town of Essex, England, 44 m by rail N E of London, at the junction of the Chelmer and Blackwater, in the latter of which are large oyster beds. Pop 5564.

**Malines**, or Mechlin, a town of Belgium, on the Dyle, 13 m. by rail S E of Antwerp; railway centre, canal to Louvain takes vessels of 150 tons, lace manufacture, for which the place was once famous, has now almost entirely passed to Brussels and other districts, but there are manufactures of linen and woollen cloth, tapestry, shawls, &c. Pop 56,100

**Malmani**, a rich goldfield in Transvaal Colony, E of Mafeking

**Malmö**, a port near the extreme S. of Sweden, on the Sound, here 16 m wide, 22 ft. of water at entrance and 21 ft at quays, graving dock, 230 ft, imports coal, grain, oils, iron, machinery, herring, salted fish, manures, and general goods, exports flour, bacon and beef, cattle, butter, chalk, matches, timber, millboard and wood-pulp, 3,000,000 tons entered and cleared, of which less than 3 per cent are British, and about the same German, the bulk being Swedish and Danish, shipbuilding, and manufactures of carpets and woollen cloth, terminus of railway running through Sweden from N to S. Regular communication from London and Grimsby. Distance from London, 725 m.; Hull, 630, Leith, 625, Tyne, 595. British vice-consul. Pop 61,000

**Malstatt-Burbach**, a town of the Rhine Province of Prussia, on Saar, with coal, iron-works, rolling mills, and manufactures of rails and machinery. Pop 31,500

**Malta**, an island in the Mediterranean, about 58 m from the nearest point of Sicily and 180 from the nearest point of Africa, 17 m long by 9 broad, and with an area of 91½ m, of which about half is under cultivation. Eastern and north-eastern coasts broken, with good inlets, along the S cliffs 400 ft. high, highest point of island about 800 ft, mean temperature 67° Fahr (53½° in winter to 82½° in summer), rainfall 10 to 26 in, but no river or rivulet, the water sinking through the porous sandstone to underground channels to appear in springs. Principal British naval station in Mediterranean, and as such strongly fortified, and having a normal garrison of some 12,000 men. Rearing of cattle, sheep, and goats, and growing of cotton, potatoes, vines, oranges, figs, cummin seed, and onions, honey produced, and great export of early potatoes and onions to Britain. The centre of trade and port of call is Valetta on the NE which is a very important coaling station, facilities being given for coaling in quarantine and at all hours of the night or day, while custom house certificates will insure full weight of all bunker deliveries. Communication by fast steamers with almost all other Mediterranean ports several times every week, and with Great Britain, *via* Sicily, Reggio, or Brindisi, every week day. Imports coal, textiles, petroleum, and colonial and general goods, &c, exports potatoes, onions, olive-oil, ivory, sugar, silk, and cotton. Of a tonnage of some 6,500,000, entered and cleared, nearly 69 per cent are British. Manufactures of gold and filigree work, jewellery, and lace. Short railway (8 m) inland from Valetta. A Malta barrel is 9½ gallons, a salm, 1 quarter; a cantar, 175 lbs; a voidupois, a cassiso, 4½ gallons. To the NE is the small island of Comino, area 1 m; and beyond it Gozo, 24½ m. None of the islands have trees,

and the high stone walls which shelter the fields give the surface a somewhat bare appearance, belying its real character. Mails to and from London every day, letters, 1d, postcards, 1d, parcels, under 3 lbs, 1s; between 3 and 7, 2s, between 7 and 11, 3s, *via* France and Italy, 1s more in each case, money orders exchanged, letters, 3½ days, parcels, *via* France, 8 days, *via* Gibraltar, 13 days. Regular communication from London, Liverpool, Manchester, Hull, and the Tyne. Distance to London, 2320 m, Liverpool, 2250, Glasgow, 2350, Tyne, 2600, Cardiff, 2150, Alexandria, 820, Marseilles, 650. Pop 185,000, of whom about 20,000 are in Gozo, about 60 in Comino, and 64,000 in Valetta.

**Malwa**, a tableland N. of the Vindhya Hills, India, giving name to the opium exported from Bombay

**Man**, Isle of, in the Irish Sea, 16 m off the coast of Wigtownshire, 28 off the coast of Cumberland, and 33 off the coast of Ireland. The island is 33 m long by 12 across at the widest part, and an undulating surface slopes up from a rocky coast to a central ridge which reaches in Snaefell a height of 2034 ft. Mining, to a considerable amount, of lead (rich in silver, Laxey on the E and Foxdale on the W) and zinc, and to a less extent of copper, and iron, rearing and export of cattle, and export of wheat; extensive and valuable herring, mackerel, and cod fisheries. The mild and pleasant climate, so free from extremes, has made the island a great summer and health resort, the number of visitors every year being probably treble that of the resident population; several narrow-gauge railways, and an electric Fell central-rail railway to the top of Snaefell. Regular communication to Douglas from Liverpool, Glasgow, Barrow, Silloth, Fleetwood, &c. Distance from Liverpool, 80 m. Area, 145,325 acres. Pop 54,758

**Manaar**, Gulf of, the southern part of the sea between Ceylon and the coast of India, separated from Palk Strait on the N by the line of reefs and shallows known as Adam's Bridge, 180 m wide, pearl fishing

**Manaos**, chief town of Amazonas, Brazil, on Rio Negro 10 m above its junction with the Amazon, important centre of river navigation, and trade in rubber. British vice-consul. Pop 20,000

**Manche**, a department of N W France (old province of Normandy), with a coast line of over 200 m along the English Channel; reaches a height of over 12,000 ft, a little iron and coal, smelting and shipbuilding, flax, hemp, apples, and very large production of cider; Normandy horses. Area, 2289 m. Pop 491,500

**Manchester**, a county of a city in SE Lancashire, England, on the E. bank of the Irwell, 188 m. by rail N.N.W of London, 31 E of Liverpool, 84 N of Birmingham, and 68 N.W. of York. It is the centre of a great manufac

turing district, there being three successive circles of important industrial towns within a radius of little over 30 m. The great staple is cotton—spinning, weaving, bleaching, printing—Manchester being the central market for the cotton trade, as Leeds for the woollen, and there are also works that deal with silk, and almost every description of fibre. There is excellent communication in every direction by canal, road, and rail, and since the opening of the great Ship Canal in 1893 the city has been a port. The imports have now an annual value of over £15,000,000, and the exports of about £8,000,000. Of the former the chief are cotton (nearly half), and food and food-stuffs (about one-sixth), but other articles, valued at from £500,000 to £100,000, are metals (iron, copper, lead, zinc), timber, paraffin and petroleum, paper-making materials, paper and strawboard, dye-stuffs, machinery, and chemical manufactures and products. Of the exports of British produce cotton manufactures and yarn make up three-quarters, and other articles of importance are machinery, &c., iron and iron and steel manufactures, woollen and worsted manufactures, and coal and coal products. The *Manchester Ship Canal*, formed in 1887-93, starts from Eastham, on the S side of the Mersey, a little above Liverpool, and extends for 35½ m to Manchester. It has a minimum bottom width of 120 ft. (except for 2½ m), and a depth of 26, while the entrance locks at Eastham have 20 ft. on the sill at low water, with a rise of 16 ft., so that ships of full size may enter or leave from half-tide to half-tide. Three other locks give a rise of 44½ ft., and the rate of speed is from 5 to 7 m. an hour, including lock passages. The locks are 65 ft. wide or more. The over bridges allow of the passage of masts, &c., to a height of 75 ft. The total cost has been over £15,000,000. Pop of city, 543,969.

**Manchester**, a town of New Hampshire, United States, on the Merrimac, 60 m. by rail N N W of Boston, the Amoskeag Falls on the river give a large amount of water-power which has given rise to very important cotton and woollen industries, and there are also manufactures of hosiery, boots and shoes, edge-tools, locomotives, and waggon and sewing machines. Pop 57,000.

**Manchuria**, a large district of N E China, very irregular in outline. Its surface is flat along the Sungari in the N E and in the S W towards the Gulf of Liaotung, elsewhere it is formed by ranges of volcanic mountains reaching heights of 6000 ft., drained by Nonni and Sungari (flowing jointly to the Amoor), the Liao-ho, flowing to the Gulf of Liaotung, and smaller streams, climate severe especially in N, communication in summer by river, the tracks which serve for roads being practically only passable in winter when the ground is frozen, rich in minerals still practically un-

developed, good coal, iron, and gold, in centre and from that south-westward, gold also in N E, salmon fishing on lower Sungari, valuable hill forests of pines, walnuts, oaks, and elms, of large size, soil fertile, and cotton, indigo, and opium produced, manufacture of seed-oil, tanning of leather, preparation of furs (sable, lynx, fox, squirrel, bear, panther, tiger, leopard, wolf, deer, &c.), and export of these products, silk, and ginseng. The district contains the three provinces of He-lung-kiang in the N W, Kirin in the centre, and Moukden or Liaotung in the S. Total area about 360,000 m. Pop estimated at from 8,000,000 to 23,000,000.

**Mandal**, a port of Norway, 17 m. E of Naze, and 22 m. W S W of Christiansand, 22 ft. at quays at high water, exports timber and fish (salmon and lobsters). British vice-consul. Pop 4000.

**Mandalay**, chief town of Upper Burma, near the E bank of the Irrawadi, and 400 m. by rail N of Rangoon, silk-weaving, carving of ivory and wood, and working in bronze (gongs), and steel (knives and swords). Letters, 21 days; parcels, 38. Pop 184,000.

**Mangalore**, a port of Madras, India, 127 m. N N W of Calicut, anchorage in open but calm roadstead with depth of 4 to 5 fathoms, and vessels load and discharge by lighters and native craft, considerable trade, annual value over £700,000, imports sugar, salt, dates, machinery, and general goods, exports large quantities of coffee from Coorg and Mysore, rice, hides, turmeric, and spices. Regular communication from London and Cardiff. Pop 44,500.

**Manila**, or **Manilla**, the chief town of the Philippines, on the bay of the same name, on the S W coast of Luzon, at the mouth of the River Pasig, hot season, March to July, rainy season, August to December, rainfall averages 100 in, maximum temperature about 90° Fahr., but there is a cool sea-breeze every night, anchorage about 3 m. off shore in 6 to 8 fathoms, but vessels up to 12 ft. can lie alongside quay, patent slip 820 ft. long, imports coal, cotton goods and other textiles, silk, lumber, drugs, rice, clocks, and jewellery, exports hemp, sugar, copra, cigars and tobacco, coffee, indigo, dyewoods, mother-of-pearl, and tortoise-shell. British tonnage, entered and cleared, over 900,000 out of some 1,500,000 tons. Mails from and to London every week or oftener, postage, 2½d per half-oz., postcards, 1d, letters, 32 days, parcels, 3s, 3s 6d, 4s, telegrams, *via* Turkey, 5s 7d a word, other routes, 6s 9d. Regular communication from London and Liverpool. Distance from London, 9850 m.; Liverpool, 9580, Glasgow, 9690, Cardiff, 9470; Singapore, 1320, Hong-Kong, 650, Amoy, 700. British consul. Pop about 350,000, of whom probably about 5000 are Europeans.

**Manitoba**, a province of central S. Canada,

extending about 260 m. westward from 95° 10' W., and about the same distance northward from the United States boundary at 49° N. It is bounded N. by Saskatchewan and Keewatin, E. by Keewatin and Ontario, S. by Minnesota and North Dakota, and W. by Saskatchewan and Assiniboin. The climate is severe in winter (1st December to 1st April), but there are no sudden changes, and the snow-fall is light. The surface is undulating prairie with hills and valleys interrupted, the centre lying on the first prairie steppe, 800 to 1000 ft.; and the west on the second prairie steppe, average about 1600 ft. The drainage is carried off by the Red River (rich open valley giving communication southward to the United States), Assiniboin, Pembina, and smaller streams. There are a great many lakes, of which the chief are Winnipeg, Winnipegosis, and Manitoba. The soil, rich black loam on deep clay sub soil, is exceedingly fertile, and both this and the climate are very suitable for wheat-growing, the wheat and flour being noted for quality. There is now also a good deal of stock and dairy farming, with a considerable export of cattle, pigs, and poultry, while the annual output of butter has reached 3,500,000 lbs, and of cheese over 1,000,000 lbs. The acres under wheat are nearly 2,000,000, the cost of the crop on each of them being estimated at £1, 12s 4d., and the production of each at 18 bushels or over. Ordinary farms run from 160 to 480 acres. There are valuable fisheries on the lakes and rivers, and fruit could be grown, though meanwhile the province cannot compete in this with Ontario and British Columbia, probably some 37,000,000 acres available for farms, of which only one-fourth is as yet taken up. Some timber in the N and E, and coal found in the S E. Good communication, the province having 1500 m of railway, with access to E and W by the Canadian Pacific, and, through the Red River valley, to the United States Northern Pacific. The much-desired line from Winnipeg to Churchill on Hudson Bay is still in the future. Area, 73,730 m., of which over one-eighth is water. Pop 255,000.

**Mannheim**, a town of Baden, Germany, at the junction of the Neckar and Rhine, 55 m by rail S of Frankfurt, great centre of grain trade, and also of railway and river traffic; iron-founding and machinery, cigars, carpets and other woollens, and india-rubber goods. British consul. Pop 141,500.

**Mans, Le**, a town of the department of Sarthe, N W France, on the Sarthe, 123 m by rail S W of Paris, hardware, machinery, railway carriages, woollens and linens, &c, and lace. Pop 63,500.

**Mansfield**, a town of Nottinghamshire, England, 17 m by rail N of Nottingham, and 141 N N W of London, manufacturing, mining,

and agricultural, centre; cotton yarn and lace thread, hosiery, iron-founding, boots and shoes. Pop. 21,111.

**Mansfield**, a town of Ohio, United States, 180 m by rail N.E. of Cincinnati, iron-foundries, stoves, threshing-machine works, flour-mills. Pop 18,000.

**Mansourah**, an important industrial town on Damietta branch of Nile, Lower Egypt, 30 m by rail S W. of Damietta, manufactures cotton and linen fabrics (sailcloth, &c.) British consular agent. Pop 36,500.

**Manzanilla**, or **Manzanillo**, a port on the S coast of Cuba, 85 m W N W. of Santiago, only vessels of 10 ft. at wharves, larger load and discharge by lighters from anchorage half a mile off shore, imports machinery for agriculture and sugar plantations, and general goods, exports cedar, mahogany and other hard woods, tobacco, and sugar. Pop 16,000.

**Maplin Sands**, a sand bank in the North Sea off the S E. coast of Essex.

**Maracaibo**, or **Maracaybo**, a port in Venezuela on the W side of the entrance from the Gulf of Venezuela to Lake Maracaibo, harbour has 5 to 7 fathoms, but, owing to the bar between the Gulf and the Lake, is available only for vessels drawing 12 ft., great article of export is coffee (valued at about £600,000), but a little trade is also done in hides, goat and deer skins, cocoa, dividivi and quina bark, sastic, copaiba, asphalt, fish sounds, boxwood, lignum vitae, cedar, &c. The Lake is over 100 m. long by from 20 (at entrance, where there is a strong current) to 75 broad. British vice-consul. Pop. 31,600.

**Maranhão**, properly **Maranhão**, a state, island, and port of N Brazil, W. of the river Parnahyba. The state, with a coast line of about 700 m, has a hilly surface, rugged in parts, and with forests along the banks of the streams, but with, elsewhere, fine grassy tablelands, of large extent and fertile soil, where cattle are reared, drainage by Parnahyba, Guajahu, and many smaller streams. Chief products cotton and sugar. The island is near the middle of the coast at the mouth of the Guajahu, and on the W side of it is the town, properly São Luiz de Maranhão, with an anchorage of 5½ to 9 fathoms, vessels loading and discharging by lighters, vessels of 22 ft in harbour, important port of call for liners, imports textiles and general goods, exports manioc, cotton, maize, hides, sugar, rubber, gum, copaiba, skins, cotton seed, tapioca, &c, imports and exports nearly equal, valued at about £500,000 each, former largely from Britain, and most of trade with Britain and Portugal, a little cotton spinning and weaving. Regular communication from Liverpool. Distance to Pará, 380 m, Manaus, 1280, Rio de Janeiro, 2300, Buenos Ayres, 3800, Liverpool, 4400, New York, 4300. Of over 500,000 tons,

entered and cleared, 10 per cent. are British. British vice-consul. Area of state, 177,520 m. Pop 431,000, pop of town, 29,500

**Marazion**, a town in Cornwall, England, 3 m. N.E. of Penzance, with tin mines and pilchard fisheries. Pop 1500

**Marbella**, a port of S Spain, 40 m N.E. of Gibraltar, anchorage half a mile off shore in 14 fathoms, and pier with 18 to 20 ft. along-side, imports coal, manure, iron and steel and iron and steel ware, fire-bricks, and general goods (mostly from the United Kingdom), exports magnetic iron ore and graphite (chiefly to Britain), oranges, lemons, grapes, raisins, cork, and esparto grass. British vice-consul. Pop 9000

**Margarita**, an island belonging to Venezuela, 45 m long by 5 to 20 broad, 20 m off shore, producing maize, cotton, coffee, sugar, and bananas, fisheries off coast, and exports salt fish. Pop probably 25,000

**Margaux**, a village famous for claret, on the Gironde, 15 m by rail N.N.W. of Bordeaux. Pop 1800

**Marianne**, or **Ladrone Islands**, a group in the Pacific N. of New Guinea, with 15° N and 145° E intersecting near the centre, Guam (the largest) belongs to the United States, the rest to Germany, active volcanoes, copra and pearl-shell. Guam has an area of about 200 m, and a pop of some 7000, while the German islands, with about the same area, have an estimated population of some 2000

**Marinsk**, one of the river and canal routes connecting the Caspian and Baltic, starts from Rybinsk on upper Volga, and passes up the Sheksna to the canal, and lake, Byelozero, and thence by river Kovzha, the Marinsk canal, and the river Vytegra to Lake Onega, and thence by canals to Lake Ladoga, and by the Neva to the Baltic.

**Marinpol**, a port of Russia, on the N coast of Sea of Azov, 65 m. W of Taganrog, connected with the interior by rail, outlet for S Russian coalfield (Kharkov), anchorage in 3 to 4 fathoms, basins up to 18 ft., fish curing and manufacture of leather, bricks, tiles, and fire-clay, machinery, hides, iron and steel, sulphur ore, magnesite, and pig-iron; exports wheat, coal, barley, rye, raven, linseed, and oil-cake. Regular communication from Tyne. Of over 200,000 tons about 33 per cent. are British. Openings for machinery of all kinds; lead (sheets, pipes, and ingots), tools, files, shovels, &c. British vice-consul. Pop 32,000

**Marlborough**, a provincial district of New Zealand in the N.E. corner of the South Island, with a length of 130 m, a width of 67, and an area of over 3,000,000 acres, of which 200,000 are arable land, 1,300,000 fit for grazing, and 50,000 forest land fit for cultivation after being cleared. The rest is heavy-wooded hill, or bare mountain-side. The timber is valuable, and

gold and antimony are worked, while copper and coal exist though not yet mined. Pop, exclusive of Maories, 13,500

**Marmora**, or **Marmara**, Sea of, a small sea lying between the Mediterranean and the Black Sea, and connected with the former by the Dardanelles, and with the latter by the Straits of Constantinople or Thracian Bosphorus, length about 175 m, width 55, area 4500, and greatest depth slightly over 700 fathoms

**Marne**, a department of N.W. France; surface flat, with low hills rising to 920 ft., drained mainly by Marne, which is navigable, and has a lateral canal for navigation for 48 m, sugar-beet and vines, the last on the dry soils overlying the chalk of the N. producing grapes yielding champagne (Reims, Sillery, Epernay); the rearing of sheep has led to the establishment of extensive woollen manufactures around Reims, and cotton hosiery is made about Epernay, also iron and copper founding, and Vitry, near the centre, is famous for bell-casting. The River Marne has a length of 325 m, of which about 150 are navigable, basin, 4900 m. Area of department, 3159 m. Pop 433,000

**Marne, Haute**, a department of N.E. France, plateau rising to 1600 ft.; wine, iron ore, blast-furnaces, cutlery. Area, 2402 m. Pop 227,000

**Marne-Rhine Canal**, gives communication between these two rivers by Bar-le-Duc, and along the valleys of the Meuse, Moselle, Saône, and Zorn, to the Ill, thence by the Ill-Rhine Canal; 130 m in France, 66 in Germany, boats of 5 ft. draught.

**Marquesas Islands**, a group of 13 islands belonging to France, in the Pacific, centre about 9° S and 140° W; volcanic; largest island Nukahiva, cocoa-nuts, copra, oranges, sugarcane, a little cotton, and mother-of-pearl. Area, 480 m. Pop 4500

**Marsala**, a port on the W coast of Sicily, Italy, 102 m by rail, and a little over half the distance in a direct line, S.W. of Palermo; anchorage for large vessels, which are loaded and discharged by means of lighters, vessels up to 13 ft. in harbour, imports petroleum, staves, hoop-iron, spirits, sugar, cattle, coffee, and coal; exports a large quantity of wine (Marsala resembling sherry), and to a small extent cheese; the British Empire takes about one-quarter of the exports, but sends only one-thirtieth of the imports, of some 500,000 tons, entered and cleared, about 11 per cent are British. British vice-consul. Pop 23,000

**Marseilles**, a great port in the department of Bouches-du-Rhône, S France, on a finely sheltered bay on the N.E. side of the Gulf of Lyons, Mediterranean, 27 m E of the mouth of the Rhone, 535 m by rail S.S.E. of Paris, and 826 (rail, &c) from London. The town is the chief commercial port of France, and the five

docks have depths varying from 19½ to 29½ ft, and one of them has a portion with a depth of 65 ft, total area, 430 acres, with 11 m of quays, largest dry dock, 594 ft long, with 25½ ft on sill. There are regular lines (branches of the Messageries Maritimes) to all parts of the world, and the total trade reaches over £85,000,000 a year (slightly more than Havre), the proportion of exports to imports being almost as three to two. The chief imports are wheat, grain and flour; oil-seeds, and olive, palm, and cotton, oil; coal, silk (raw), cocoons, and silk waste, hides and skins, cotton goods, indigo, wine, spirits, beer, sugar (raw), coffee, pepper, and tallow. The indigo has fallen off since artificial indigo was made, but this is a matter of cost. The oil-seeds, oil, and tallow are for the soap-making and manufacture of oil-cake which are the chief industries of the place, after this come oil and sugar refining, flour milling; iron, lead, and zinc, smelting and manufacture, the making of vegetable butter from cocoa-nut oil, and shipbuilding. The leading exports are tiles, oil and oil-cake, flour, sugar, silk and other textiles, bauxite, anchovies, wine, spirits, soap, and candles. A considerable number of fishing smacks belong to the place. Of some 10,000,000 tons, entered and cleared, 75 per cent. are French, and 14 British. Part of the trade has passed to Genoa since the opening of the St. Gothard line, and probably more will go when the Simplon railway is finished. Letters, 23 hours, parcels, 2½ days. Regular communication from London, Liverpool, and Hull. Distance from London, 2070 m, Liverpool, 1980, Glasgow, 2190, Tyne, 2340, Gibraltar, 690, Algiers, 400, Tunis, 470, Genoa, 220; Naples, 445; Alexandria, 1420, Port Said, 1512. British consul-general. Pop 491,600.

**Marshall Islands**, a small group of coral islands belonging to Germany, E. of the Carolines, 10° N and 170° E, copra. Parcel post, under 3 lbs, 3s, between 3 and 7, 3s. 6d; between 7 and 11, 4s. Area, 158 m. Pop. about 15,000, of whom 55 are Europeans.

**Martinique**, a French West Indian Island, near the centre of the Lesser Antilles, 43 m long and 12 to 20 broad; soil formerly very fertile producing sugar-cane, cacao, coffee, tobacco, and cotton, but the island was almost entirely devastated in 1902 by a great volcanic outbreak from Mont Pelée (4430 ft). The area of the island is about 380 m, and previous to this volcanic eruption there was a pop. of 190,000, of whom about 10,000 were of European descent. St Pierre, on the W side, the largest town (26,000), was completely destroyed. Regular communication from London. Mails from and to London every fortnight; letters, 2d, postcards, 1d, parcels, under 3 lbs, 3s; between 3 and 7, 3s. 6d; between 7 and 11, 4s., parcels, 16 days; telegrams, 5s. 2d a word. British consul.

**Maryborough**, a port of S E Queensland, Australia, on the N. bank of the Mary River 25 m from its mouth, and about 180 m N of Brisbane, railway communication also inland, vessels drawing up to 17½ ft can reach wharves, up to 24 ft find anchorage at mouth of river, large smelting works for ore from all Australia, excellent timber in neighbourhood, and considerable cultivation of sugar-cane. The port is the outlet for local produce, and also of the Wide Bay and Burnett Nanango districts—the latter grazing country second only to the Darling Downs—Gayndah, Mount Perry (copper), the Gympie, Mount Shamrock, and Eidsvold gold-fields; and the Burrum coalfield. The imports consist of all sorts of British and foreign manufactured and general goods. Pop 10,500.

**Maryland**, a state near the centre of the E coast of the United States, only about 35 m of coast on the Atlantic, but Chesapeake Bay, the Susquehanna, the Patapsco, and the Potomac provide harbours. The surface rises to the Blue Ridge district of the Appalachians, the eastern half of the state being low and the western mountains reaching a height of 3500 ft. Communication inland is provided by the navigable rivers, and by rail and canal up the Potomac valley. Excellent coal is mined in the extreme west, and iron, chrome, copper, clay for bricks, marble, and soapstone are also worked, pine, chestnut, oak, hickory, and walnut, tobacco, peaches, tomatoes, melons, and all kinds of vegetables are extensively grown for market, and there is a large trade in tinned peaches and vegetables, as well as in tinned oysters (from Chesapeake Bay), manufactures of cottons, woollens, tin ware, iron and steel, flour, and artificial manures. Area, 12,210 m, of which 2400 are water. Pop. 1,188,100.

**Maryport**, a port in Cumberland, England, at the mouth of the Ellen, 28 m by rail S W. of Carlisle, coal and iron centre, with blast-furnaces, iron and steel works, shipbuilding, and making of sail-cloth; harbour tidal, with rise of 19 ft. at neaps and 25 ft at springs, docks having 14 to 19 ft., and 19 to 25 ft. on sills, at these times, chief imports (total value over £400,000), iron ore and grain; exports (total value over £500,000), almost entirely iron and iron and steel manufactures. Tonnage, entered and cleared, about 400,000 tons, or if coasting traffic be included, over 1,000,000. Pop 11,896.

**Mashonaland**. See Rhodesia.

**Massachusetts**, one of the New England States of the United States, on the Atlantic along which it has a sea boundary of some 300 m. Off the coast the islands of Martha's Vineyard and Nantucket. Surface flat along coast, elsewhere undulating, reaching in the W a height of over 3500 ft.; mountains wooded and

valleys fertile, a considerable amount of tobacco being grown, great centre of United States whale, deep-sea, and coast, fishing, the total produce—cod, herring, halibut, mackerel, lobsters, oysters, clams, &c—apart from the whale-fishing, being valued at over £1,500,000, great centre also of commerce and export, many industries—weaving of cottons, woollens, and worsteds, boots and shoes, iron and steel goods and machinery, food-stuffs, clothing, leather, paper, wooden goods, shipbuilding, pork-packing, ice-export, &c, considerable local trade with Canada Area, 8315 m Pop 2,805,500

**Massillon**, a town of Ohio, United States, centre of rich coalfield, with iron-smelting, rolling, etc Pop 12,000

**Massowa**, the port and chief town of Eritrea, Italian Africa, on a small coral island in the Red Sea, about 200 yards from the mainland, with which it is connected by an artificial bank nearly a mile in length, the sea between island and mainland forms harbour with depth of from 5 to 9 fathoms, imports (total value some £400,000), textiles, metals, and general goods, exports (total value some £100,000), pearls and mother-of-pearl, Abyssinian coffee, &c Parcel post, under 3 lbs, 3s, between 3 and 7, 3s 6d; between 7 and 11, 4s, telegrams, 3s 2d a word British vice-consul Pop 8000, of whom about 600 are Europeans

**Matabeleland** See Rhodesia

**Matadi**, port on the Congo, 100 m. from mouth, below last falls, western terminus of Congo railway to Stanley Pool

**Matamoros**, a town of Mexico, on the right bank of the Rio Grande, 40 m up from the Gulf of Mexico, port for small vessels, the bar having a depth of little over 9 ft, railway (75 m) to San Miguel Pop 14,000

**Matamoros**, a town with coal mines in Puebla, centre S Mexico Pop 13,000

**Matanzas**, a port on the N coast of Cuba, 50 m (55 by rail) E of Havana, bar 4 to 6 fathoms, and anchorage 16 to 24, but only 8 ft at quays, so that vessels load and discharge by lighters Sugar refineries and great export of sugar and its products. British vice-consul Pop 36,500

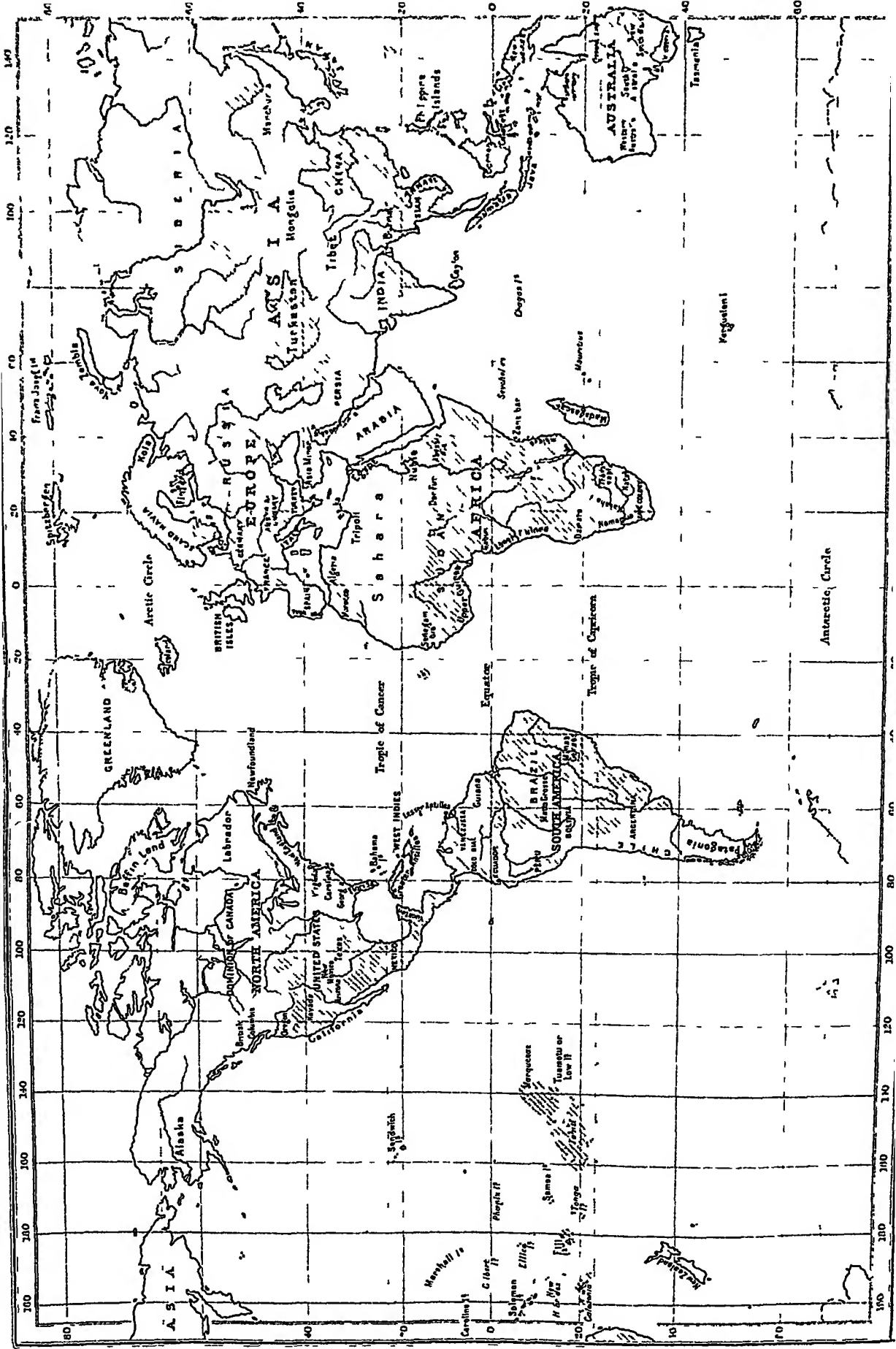
**Mataro**, a port of N E Spain, 19 m by rail N E of Barcelona, good anchorage in 4 fathoms, imports coal, exports wine and brandy, has cotton-weaving, iron-founding and machinery, making of leather and white lead, and shipbuilding Pop 18,000

**Matto Grosso**, a large state in the extreme W of Brazil along the Bolivian border, with undeveloped coal, gold and diamonds exhausted The town of the same name has, since the minerals failed, almost ceased to exist Area of state, 532,550 m Pop 93,000, almost entirely of Indian and negro race

**Mauritius**, an island belonging to Britain, in the Indian Ocean, 550 m E. of Madagascar,

crossed by 20° S and 57½° E, 36 m long from N. to S., and 28 wide, volcanic, and surrounded by coral reefs, tableland with mountains some 2000 ft high in centre N., centre E, and S W.; highest point over 2700 ft, rainfall on plateau about 40 in, temperature ranges from 60° Fahr to 100°, hurricane season from December to middle of April, 105 m of railway open up different districts, ebony, iron-wood, bamboo, cocoa-nut, benzo and aloe, sugar and sugar products are the staples, and spice, vanilla, fibres, and cocoa-nut oil are also exported, while tobacco is grown, and attention has recently been turned to tea Imports (total value about £1,600,000, about two-ninths from the United Kingdom, less than two-thirds from colonies), rice, wheat, and bread-stuffs from India, oxen from Madagascar, sheep from South Africa and Australia (cold storage for frozen mutton from latter), cotton, coal, hardware, manure, and other general goods Exports (total value over £2,000,000, more than one-tenth to United Kingdom, about five-sixths to colonies), the productions as noted above, sugar accounting for about £1,900,000, in order after which are aloe-fibre, molasses, rum, vanilla, and cocoa-nut oil Of over 650,000 tons, entered and cleared, 69 per cent are British The island is passing largely into the hands of natives of India The chief town, Port Louis, in the N W, has a harbour with a depth of from 12 to 28 ft at quays, dry docks, 324 to 430 ft, with 14 to 20 ft on sills. Pop 54,000 Dependencies of Mauritius are Rodrigues (18 m by 7 m) 344 m to the W, the Seychelles, the Amurantes, the St. Brandon group, and the Oil Islands (Chagos, &c) to the N and N E, farthest of them about 950 m Of the last group the chief is Diego Garcia, an irregular horse-shoe 30 m round—a coaling station Rodrigues is volcanic, with the same products as Mauritius, the others coral, producing cocoanuts and cocoa-nut oil Mails from and to London every fortnight or oftener, letters, 1d per half-oz, postcards, 1d, money orders to and from, parcels direct, not over 3 lbs, 1s, between 3 and 7, 2s, between 7 and 11, 3s. *via* France, a shilling more in each case, telegrams, 3s a word Letters, 28 days, parcels, *via* France, 28 to 33 days Regular communication from London, Southampton, South Africa, Ceylon, Australia, &c Distance from London, 7000 m, Liverpool, 6930, Glasgow, 7050, Tyne, 7290, Réunion, 115, Natal, 1300, Cape of Good Hope, 2300, Colombo, 2100 Area of Mauritius, 705 m, pop 370,500, of whom 3000 are garrison Area of dependencies, 172 m, pop 9500

**May, Isle of**, an island in the outer part of the Firth of Forth, Scotland, with powerful lighthouse 240 ft above high water, electric light visible 21 m





**Maybole**, a town of Ayrshire, Scotland, 8 m. by rail S by W. of Ayr, making of boots and shoes, and of agricultural implements. Pop 5492

**Mayence**, or **Mainz**, a town of Hesse, Germany, on left bank of Rhine, opposite the mouth of the Main, 24 m by rail W S W of Frankfurt, great transit centre by road and rail with harbour and quays along Rhine, deals in coal, grain, wine, timber, iron, &c., making of furniture, machinery, pianos, leather goods, chemicals, hats, and boots. Pop 81,500

**Mayenne**, a department of N W France, with a town of same name, undulating, rising to 1770 ft.; drained by the Mayenne; coal in W, marble, and slate; a little cotton and linen spinning and weaving; apples for cider, town does not call for special notice. Area of department, 1996 m. Pop 313,500, pop of town, 10,500

**Mayo**, a county of Connaught, N W. coast of Ireland; barren rock and bog, rising to height of nearly 2700 ft.; a little poor coal and iron ore (useless for want of fuel), and slate, cattle-rearing, salmon and other fisheries, and linen weaving. Area, 1,333,310 acres. Pop 199,166

**Mazagan**, a port on W coast of Morocco, 125 m N N. W. of Morocco, fertile district around, roadstead with anchorage in 6 fathoms; imports cotton, sugar, tea, candles, and woollen cloth; exports almonds, maize, eggs, beans, peas, wool, canary seed, and wax, and has a good deal of trade with the Canaries. Regular communication from London. Imports valued at nearly £300,000, of which more than half are from the United Kingdom; exports at over £350,000, of which more than one-third go to United Kingdom. Of nearly 400,000 tons, entered and cleared, over one-third are British. British vice-consul. Pop 7000

**Mazamet**, a town of the department of Tarn, centre S France, 43 m E S E of Toulouse, with large woollen mills, dye-works, and tanneries. Pop 14,000

**Mazarron**, a port of S E Spain, near Carthage, with import of coal, and export of lead, lead ore, and iron ore. Of 100,000 tons 35 per cent are British. British consular agent. Pop 3000

**Mazatlan**, a port on the W coast of Mexico, near the mouth of the Gulf of California, considerable centre of distribution, 12 ft on bar of river of same name, at the mouth of which the town stands, 18 ft inside, with rise of 16 ft at springs and 4 ft at neaps, large vessels anchor 1 to 2 m out, but the anchorage is dangerous between June and October, coaling station, imports hardware, machinery, and general goods, exports gold and silver coin and bullion, silver ore, Brazil wood, hides, orchil, and dye-woods, mostly to United States. Regular communication from San Francisco. British vice-consul. Pop 18,000

**Meath**, a county of Limerick, Ireland, near centre of L. coast; surface flat, with higher ground to W and N W.; drained by Black-water and smaller streams; soil fertile, with excellent pasture, extensive cattle-rearing for British market. Area, 577,731 acres. Pop 67,197.

**Meaux**, a town of the department of Seine-et-Marne, France, on the Marne, 30 m. by rail E N E of Paris; sugar works, steel works, flour, and cream-cheese. Pop 11,000

**Mecklenburg**, two grand-duchies of N Germany (Mecklenburg-Schwerin and Mecklenburg-Strelitz), at the W end of the Baltic, along which there is a coast-line of about 66 m, surface flat, with low ridge in centre, good soil, making of beet-sugar, beer, spirits, and leather, famous for merino sheep, cattle, pigs, and horses, amber on coast, 900 m of railway, and lake and streams connected by canals. Total area, 6266 m (Mecklenburg-Schwerin, 5135) Pop 710,500 (Mecklenburg-Schwerin, 608,000)

**Medellin**, the second city of Colombia, Bogotá, from which it is 150 m N W., being the first, in a valley 4800 ft above sea-level; point of distribution, and great gold and silver centre of the state in a rich mining region. British vice-consul. Pop 10,000

**Mediterranean**, a great inland sea, with Europe on the N., Asia on the E, and Africa on S, communicating with the Atlantic by the Strait of Gibraltar, with the Black Sea by the Dardanelles, Sea of Marmora, and Bosphorus, and with the Red Sea by the Suez Canal. The chief sub-divisions (Adriatic, Aegean, &c) are separately noticed, and so are the chief islands. The extreme length is 2300 m, the breadth varies from about 86 m to 600 m, the area is about 1,000,000 m, and the drainage area about 3,000,000, chief rivers, Ebro, Rhone, Po, Arno, Tiber, and Nile. Italy, Sicily, and the shallows of the Adventure Bank stretching from Sicily to Cape Bon on the African coast divide the sea into an eastern and a western basin, of which the former has an extreme depth of 2187 fathoms and the latter of 2406 fathoms, while the mean depth of the whole area has been estimated at 770 fathoms. The rivers bring but a small supply of water compared with the size of the sea, and owing to this and the great amount of evaporation in such a latitude, there is a constant inflow from the Atlantic, and the water is saltier than in the great oceans. In some places, under particular wind conditions, the tide rises as much as 5 ft, but taking the sea all over it may be said to be nearly tideless. There are extensive and productive fisheries—tunny, anchovies, pilchards, and mackerel—and red-coral and sponges are found along many parts of the coast. It is said that since the Suez Canal was opened the pearl oyster has come in from the Red Sea.

**Médoc**, a district, some 40 m. long by 5 to 10 wide in the department of Gironde, France, along the left bank of the Gironde, famous for its clarets (Chateaux Margaux, Lafite, Latour, &c.)

**Medway**, a river of Kent, England, with a course of some 70 m by Rochester, Chatham, and Sheerness, to the Thames between the islands of Grain (W.) and Sheppey (E). The last 12 m from Rochester is navigable for sea-going vessels, from Maidstone for barges drawing 6 ft., and from Tunbridge for barges drawing 3½ ft.

**Meerane**, a town of Saxony, Germany, 43 m. by rail S of Leipzig, manufactures woollens and silk, and does a large trade with Britain, France, and the United States; pop. trebled in last 50 years of 19th century. Pop 24,000

**Meissen**, a town of Saxony, Germany, on left bank of Elbe, 14 m by rail N.W. by W of Dresden, pottery and porcelain—the famous Dresden china—formerly made in town, now at Triebisch. Pop 20,500

**Mekong**, a great river of Indo-China, with a total length of over 2700 m, and a basin of 400,000. Navigation of middle and upper parts interrupted by rapids

**Melbourne**, the chief town and port of Victoria, Australia, on the Yarra-Yarra, at the head of Port Phillip Bay near the centre of the S coast of the state. The harbour on the smaller Hobson's Bay, 2½ m distant by road or rail, can accommodate vessels up to 27 ft., and vessels drawing 22 ft can get up the Yarra-Yarra to the city itself, two dry docks take vessels up to 5000 tons, graving dock largest vessels afloat, railways radiate in all directions, and include lines passing into South Australia and into New South Wales and onward to Queensland. Great gold, wool, and farm-produce, centre, with freezing accommodation for 2500 tons of butter and 300,000 carcasses of sheep. Imports manufactured goods of all kinds, exports wool, gold, tallow, butter, cheese, flour, fruit, frozen and preserved mutton, wine, and grain. Time for noon at Greenwich, 9 40 P.M. Letters, 31½ days, parcels, *via* Gibraltar, 39, *via* Brindisi or Marseilles, 32. Regular communication from London, Liverpool, Southampton, Bristol, and Manchester. Distance from London, 11,250 m, Liverpool, 11,180, Glasgow, 11,288, Cardiff, 11,080, Cape Town, 5790, Adelaide, 500, Sydney, 570. *Port Phillip Bay* has an area of some 800 m, of which over 500 are available for anchorage. The length is about 35 m, the breadth at the widest part the same, and the distance between the headlands at the mouth, two. Pop of town, 69,000

**Melton Mowbray**, a town of Leicestershire, England, 15 m by rail N.E. of Leicester, brown iron-ore and blast-furnaces, pork pies and Stilton cheese. Pop. 7454.

**Memel**, a port of N.E. Prussia, at the opening of the Kurisches Haff into the Baltic, 70 m. N.N.E. of Danzig; depth on bar, 22 ft.; good harbour; imports salt herring, coal, dyewoods, and artificial manures, exports timber (sleepers, deals, battens, &c.), grain, hemp, flax, bristles, amber, linseed, pitch, and tar. Britain takes about 33 per cent of a total export of over £1,000,000, of which half is timber. British vice-consul. Regular communication from Hull. Distance from London, 1025 m, Hull, 930, Leith, 925. The river of the same name, or the Niemen, rises in Russia, and has a course of 565 m., partly in Russia and partly in Germany, to the Kurisches Haff, a little above the town, navigable for more than 100 m to Kovno; basin, 35,000 m. British vice-consul. Pop of town, 20,500

**Memphis**, a town of Tennessee, United States, on the left bank of the Mississippi, 826 m up from New Orleans, cotton-seed oil, machinery, and wooden goods; great cotton centre, and enormous export of cotton. Pop 102,500

**Menai Strait**, a narrow sea-opening 14 m long and 200 yards to 2 m wide, in N.W. Wales, between Carnarvon and Anglesea, crossed by a suspension bridge 570 yards long and 100 ft. above high water, and by Robert Stephenson's famous Britannia Tubular Bridge, 460 yards long and 100 ft. above high water, carrying the railway line to Holyhead

**Menam**, a river of Siam, with a course of 750 m, and a delta of 120 on the Gulf of Siam, supplies flood water to large rice-producing district.

**Mendip Hills**, a small range running E.S.E. and W.N.W. across Somersetshire, England, extreme height, 1067 ft., zinc mining, and still a little lead though this is not now of importance

**Mendoza**, a state of the Argentine Republic (with a town and river of the same name) occupying the western side of the Andes, and the pampa at their base, highest point Aconcagua (22,427 ft.), rainfall very small, cattle in E., and sub-tropical cereals, wine, and tobacco; rich in minerals, including coal and petroleum, but only copper and silver worked. The town, 2300 ft above sea-level, and the river do not call for particular notice. There is railway communication from Buenos Ayres to the town (650 m), and in summer when the Uspallata Pass is open mails for the W. coast are taken across to Santa Rosa, and thence by rail to Valparaíso. Mendoza to Puente del Inca (Transandine Railway) about 98 m, coach to Las Cuevas, 9½ m, mules to Juncal, 13 m., coach to Salto del Soldado, 15 m., rail to Valparaíso, 102 m, Salto del Soldado to Santiago, 106 m. Area of state, 56,502 m. Pop 141,500

**Merida**, a town of Mexico, 25 m S of Progreso; centre of henequen, or sisal hemp, districts. Pop 37,000

tobacco, petroleum, and iron ware, from other European countries, exports (total value some £500,000—one twentieth to the United Kingdom), all the products of Aden, which see. Over 100,000 tons in one third are British. Regular communication with Liverpool and Manchester. Pop 10,000

**Merthyr-Tydfil**, a town in Glamorgan, Wales, on the Taff, 21 m by rail N N W of Cardiff; great coal, and iron and steel, centre (Aberdare, Dowlais, Cymorthfa, Plymouth Works). Pop 69,227

**Merv**, a fertile district of Turkestan, some 60 m long and 10 wide, on the borders of Persia and Afghanistan; town of same name 512 m by rail from the Caspian, irrigation from Murghab river, important trade centre, with small manufactures of carpets and silver ornaments. Pop of district estimated at 300,000, of town, 12,000.

**Merwede Canal**, connects Amsterdam and Utrecht with the Lek (30 m) and the Waal (45 m), depth, 10½ ft

**Meshed**, a town of Khorasan, N E Persia, 48 m N N E of Teheran, and 230 by road from Herat, important trade centre for goods from and to Russia, Turkestan, India, and Afghanistan, dealing in sugar, piece-goods, skins and leather, wool, carpets, opium, dried fruits, turquoises, &c., small manufactures of carpets, felt-rugs, swords, jewellery, &c. British consul-general. Pop 70,000

**Messina**, a port of N E Sicily, Italy, on the Strait of Messina, depth of harbour at entrance 8 to 10 fathoms, depth at quays 19 to 33 ft; imports (total value over £1,250,000), cottons, woollens, iron and steel, coal, timber, dried cod, and general goods, exports (total value over £1,500,000), wine, silk, oranges, lemons,

France, Italy, Holland, Austria-Hungary, and Spain. Pop 8000.

**Meurthe-et-Moselle**, a department of N E France; surface plateau or hilly, rising in Vosges in S E to nearly 3000 ft, but with fertile valleys, forests, vines, sugar-beet, and hops, valuable deposits of iron and rock-salt; making of iron, steel, glass, earthenware, chemicals, cottons, woollens, tobacco, paper, &c. Area, 2025 m. Pop 185,000

**Meuse**, a department of N E France, undulating plateau rising to a height of nearly 1100 ft, forests, wine, sugar-beet, and hemp; iron ore, and manufactures of glass and paper. The River Meuse has a course of some 570 m. (300 m France) from Haute-Marne to the Waal (Rhine), navigable for some 420 m, canal connection with Marne and Aisne, receives from E the Ourthe and from W the Sambre, in Holland name changed to Maas, area of basin, 13,000 m. Area of department, 2405 m. Pop 283,500

**Mexborough**, a town of the West Riding of Yorkshire, England, on the Don, 11 m N E of Sheffield, with potteries and iron works. Pop 10,417.

**Mexico**—*Surface and Size, &c*—Mexico is a federal republic in the S W of North America, extending between 14½° and 32½° N, and between 86½° and 118° W, with an extreme length of some 2000 m, a breadth varying from 1000 to 130 m (Isthmus of Tehuantepec), and an area of 767,005 m. It is bounded N by the United States and the Gulf of Mexico, E by the Caribbean Sea, S by British Honduras and Guatemala, and S W. by the Pacific. The boundary with the United States has a length of 1833 m, of which 1136 is along the Rio Grande. The

Peninsula of Yucatan standing out in the S E helps to enclose the great sweep of the Bay of Campeachy in the S W of the Gulf of Mexico, and on the W coast the long, narrow Gulf of California runs up between the peninsula of Lower California and the mainland, while S of the Isthmus of Tehuantepec (S) is the minor sweep of the Gulf of Tehuantepec. There is a coast line of some 6000 m, but owing to shallow-water lagoons, bar obstructed river mouths, and the unbroken nature of parts of the shore, the places suitable for good harbours are few. Acapulco on the W coast is naturally suitable, and at Tampico and Vera Cruz on the Gulf of Mexico much has been accomplished by engineering skill. The greater part of the surface is plateau. Along each side is a coastal strip of an average width of 60 m, and from this the surface rises rapidly to mountain ranges, from the summit line of which it drops to the central plateau. The lowest line along the Isthmus of Tehuantepec has a height of less than 400 ft., and the low ground extends out the Peninsula of Yucatan, the centre of which has a mean elevation of some 800 ft. To the S of this is the beginning of the Cordillera of Central America. To the N of the Isthmus two lines of mountains begin —on the W the coast range of the Sierra Madre (9000 ft) and on the E the line of heights (16,000) that pass northward into the Rocky Mountains (sometimes spoken of as the Sierra Madre Oriental), while the centre of Lower California is occupied by a range with a height of 7000 to 10,000 ft. In the extreme S there is a connecting chain running parallel to the Sierra Madre, but farther inland and with some of the peaks reaching heights of from 12,000 to 19,500 ft. From this northward is the great central plateau, flat or undulating in surface, with the height varying from 6000 to over 8000 ft. There are many dormant or extinct volcanoes, and in the S a few still in action, but there have been for a long period no violent outbursts, and the earthquake shocks though frequent are never severe. The N of the plateau is drained by the Rio Grande and its tributaries, in the interior many of the streams are lost in salt lakes, or are used up for irrigation, and the streams of the coast slopes are mostly short and too rapid to be of use for inland communication. The coastal strips and low ground are hot and unhealthy, with a maximum temperature of over 100° Fahr, and a rainfall ranging in places up to 130 in, but along the plateau the maximum temperature in summer is about 88° and in winter the minimum may be as low as 30°, falls of snow, though very rare, occasionally taking place. The line of perpetual snow is 15,000 to 16,000 ft. In the extreme N there is the usual round of seasons, but farther S there is a rainy season from the

end of May or the beginning of June to the end of October or the beginning of November, and a dry season covering the rest of the year. Along the most of the plateau the average rainfall is about 25 in.

*Government, &c.*—Mexico is a federal republic with a federal district, twenty-seven states, and two territories, each of which manages its own local affairs. The president holds office for four years, and the Congress consists of a House of Representatives and a Senate. The pop. is about 13,546,000, of whom less than 20 per cent are whites, and of those of mixed or Indian blood only a very small proportion can be said to be civilised. The capital, Mexico City, is connected by rail with Vera Cruz and Tampico on the Gulf of Mexico; and from it lines northward form junctions at different points with the United States systems. Across the Isthmus of Tehuantepec a line (200 m) connects Salina Cruz on the Pacific with Coatzacoalcas on the Gulf of Mexico, and should a ship railway ever be constructed (a project that has many advocates) it would form a line of communication between the E and W coasts of North America shorter by 700 m than the Nicaragua Canal route, and by 1000 m than the Panama Canal route. There are shorter lines in different districts, and the total railway mileage is some 10,000. The chief ports have regular communication with the United States and with Europe.

*Resources and Productions.*—The soil is fertile, and in many places where irrigation is good two crops can be got in one year, but, on the other hand, many of the coast districts are useless, as no white man can stand the climate; and much of the middle portion of the plateau is desert from want of water. In the N great herds of horses, cattle, sheep, and pigs are reared, largely for the United States market. Besides food-stuffs (wheat, maize, rice, beans, and bananas, &c.) there are sugar, rum, molasses, coffee, cotton, henequen (agave sisal-hemp), cacao, oranges, cocoa-nuts, vanilla, mulberry, cochineal, cinchona, and rubber, and efforts are being made to introduce vines, olives, and European fruits.

As regards minerals Mexico is one of the wealthiest countries in the world. Coal is said to exist in many districts, but the working of it has still to be developed. Silver is widely spread, and some of the silver and gold mines, though they seem to have been worked from the earliest times, are still very productive. There are also deposits of copper, iron, lead, platinum, mercury, tin, cobalt, antimony, bismuth, manganese, zinc, petroleum, salt, sulphur, amber, and onyx, &c. The annual production of silver is valued at about £19,000,000 a year, and of gold at about £1,500,000. The chief manufactures—making of rum and spirits, cotton spinning and weaving, and printing.

the manufacture of woollen cloth; the manufacture of cigars and cigarettes, and of pipe tobacco, paper, leather, and earthenware, and the refining of sugar—are increasing

*Trade.*—The imports, valued at over £13,000,000, are mainly raw cotton, coal, and coke; cottons, linens, woollens, and silks, iron and steel, machinery, chemicals, paper, glass and earthenware, guns, wood and furniture, saddlery and harness, and petroleum. Over half comes from the United States, and about 16 per cent from Great Britain. The exports are valued at some £30,000,000, of which half are precious metals and nearly two-thirds minerals (silver, gold, lead, copper), over one-third vegetable substances (henequen, coffee, fruits, chicle gum, tobacco, rubber, vanilla), mahogany and other furniture woods and dye-woods—mostly logwood, and about one-fifteenth live stock, while beans, hides, and leather have also some value. The imports received by the United Kingdom vary much in value, but may be averaged at nearly £500,000. The chief articles are mahogany and dye-woods (logwood, &c), oil-seed cake, lead, silver, copper (very variable of recent years), and coffee. The exports sent from the United Kingdom have a total average value of about £2,000,000, the chief articles being cottons and cotton yarn, woollens, machinery, coal, soda compounds and chemicals, linen and linen yarn, jute and jute manufactures, quicksilver, implements and tools, rubber goods, ready-made clothing, china and earthenware, and hardware. The import duties are very heavy. British manufacturers might find openings in agricultural machines and implements, mining and pumping machinery, hardware, paints and colours, glass, china, earthenware, and leather goods (saddlery, &c), in especial, and in many other branches as well if they would but give the matter their attention. If, however, they are to do business they must attend carefully to the customs requirements; follow the wishes of their customers as to style, packing, and shipment; furnish the article within a reasonable time (three months or less), quote prices and sizes, and catalogue, so as to be understood by customers, give estimates and descriptions when asked, and lastly combine so as to establish a great “universal provider” store controlled and managed by trustworthy British subjects. One American firm, for example, at present represents some 80 United States manufacturing establishments. There are British consuls at Mexico City and Vera Cruz, and vice-consuls at all the leading places. Letter postage from the United Kingdom, 2½d per half-oz.; postcards, 1d, parcels, not over 3 lbs, 1s, between 3 and 7, 2s 6d, between 7 and 11, 3s 6d; telegrams from 1s 6d to 2s 7d a word according to the place, mails from and to London twice

a week, letters to Mexico City, 12 days; parcels, 33 days

*Money, &c*—The unit of account is the silver dollar, or peso, which has a nominal value of 4s, but an actual worth of half that amount or less, according to the rate of exchange. The metric system is the only one legal, but the old Spanish weights and measures are not absolutely gone. For gold and silver a grano = one-twentieth of a gramme, 12 granos = 1 tomin, 6 tomins = 1 ochava, 64 ochavas = 1 marco, and 2 marcos = 1 libra. A league is equal to nearly 3½ British miles. The Mexican flag has three vertical bars—green, white, and red, with the green next the staff. In the centre of the white bar is a black eagle grasping a green snake in its beak and right talon, and with the left talon resting on a quarter wreath.

*Mexico*, the chief town of the country just described, in the federal district, surrounded by the state of Mexico. The state, near the S end of the plateau, has important gold and silver mines. The city, 7350 ft. above sea-level, is a great railway, transit, and distribution, centre British vice-consul. Area of state, 9247 m., pop. 924,500. Area of federal district, 463 m., pop. 540,500, pop. of town, 330,000.

*Mexico, Gulf of*, an inland sea in the S of North America, along the coasts of the United States and Mexico, with an extreme length from E to W of about 1120 m, and a breadth from N to S at widest of 680. The coast-line has an extent of some 3000 m, and the entrance on the S E between the peninsulas of Florida and Yucatan has a width of some 500 m. This space is, however, blocked in the centre by the W end of the island of Cuba, and communication with the Atlantic lies to the N of this by the Strait of Florida (the navigation obstructed by the Bahamas and the other coral islands between these and Key West), and with the Caribbean Sea by the Yucatan Channel. The coasts are generally low, and the sea off them for a considerable distance out has nowhere a greater depth than about 100 fathoms, but the deepest part of the Gulf, near the centre, reaches to over 2000 fathoms. The total rise is nowhere, even at spring tides, over 4 ft. The navigation is dangerous between September and March on account of violent N E gales, known as Nortes. Area about 1,716,000 m.

*Michigan*, a state of the United States, in the N E, consisting of two detached portions, the one a peninsula between Lake Superior and the N end of Lake Michigan, the other, and larger, of a peninsula between Lake Michigan on the W. and Lake Huron and the W end of Lake Erie on the E. The surface of the former is hilly, while that of the second is hilly in the N and flat in the S, drained by the Muskegon, G and, Kalamazoo, and Saginaw, and a very large number of smaller streams, many of

which are very important sources of water-power. Extensive forests of pine and hard wood. Iron ore and copper in northern portion, coal, large deposits of salt, and gypsum, in other portion. The iron ore is exceedingly rich and the output is enormous, reaching a total of over 6,000,000 tons, while copper is also produced in very large quantities. The timber production also is enormous, and is of value as furnishing means for the manufacture of doors, windows, and other joiner-work and furniture. Fresh-water fishing and large shipping trade on the lakes, the coast line having a length of some 1700 m. Total area, 57,430 m. Pop. 2,421,000

**Michigan**, a lake port of Indiana on the lake of the same name, 57 m by rail E S E of Chicago, with railway works, lumber trade and making of wooden goods, refrigerators, cars, hosiery, boots and shoes, &c. Pop 15,000

**Michigan, Lake**, one of the chain of great lakes of North America, with an extreme length from N to S of about 340 m, a breadth of from 50 to 88 m, a mean depth of about 120 ft, and a maximum depth of 870 ft. The surface has a level of about 580 ft, 20 ft lower than Lake Superior, and the same as Lake Huron, with the latter of which it is connected by the Strait of Mackinaw. The total area is about 22,500 m. The rise at spring tides is about 3 in.

**Michoacan**, a state on the Pacific coast of Mexico to the S of the centre, mountainous, with rich deposits of gold and silver. Area, 22,874 m. Pop 936,000

**Middelburg**, in the island of Walcheren, Holland, chief town of the province of Zeeland,  $4\frac{1}{2}$  m by rail N E of Flushing, with which it is connected by canal, harbour takes vessels drawing up to 24 $\frac{1}{2}$  ft, dry dock 413 ft long, with 15 ft on the sill at ordinary springs, imports coal, tin, timber, and general goods, exports grain, potatoes, fruits and vegetables, and cattle, small trade in madder, and has cotton mills. Pop 18,000

**Middlesbrough**, or **Middlesborough**, a town of the North Riding of Yorkshire, England, 50 m by rail N of York, and 245 m N by W of London, centre of the Cleveland iron district—famous alike for the quantity and quality of its ore—and of a salt-producing district, blast-furnaces, iron and steel works, shipbuilding, marine engineering works, salt, soda, and other chemical works; and miscellaneous manufactures of iron goods. Large harbour on the Tees, about 8 m from the mouth, minimum depth on bar 19 ft, with a rise at springs of 17 ft., and at neaps of 12 ft, depth on sill of dock at ordinary spring tides, 23 ft, graving dock 576 ft long, with a depth on sill at high water of 15 $\frac{1}{2}$  ft. Imports have a total value of nearly £1,500,000, the chief articles being ores of iron and manganese, un-

wrought steel, crude zinc, metal manufacture; machinery and mill work, hewn and sawn timber, and sugar. Exports of British and Irish produce have a total value of £5,500,000; chief articles manufactures of iron and of iron and steel, cotton piece-goods and yarn, ships, woollen and worsted manufactures, machinery and mill work, manure, railway carriages, coal and coal products. Distance from London by sea, 300 m, Leith, 140. Pop 91,317

**Middlesex**, small but important county of S England, to the N. of the Thames, second smallest of the English counties, surface flat or undulating, nowhere over 450 ft; dairy farming, market gardens, and orchards. Area, 181,301 acres. Area, exclusive of London, 149,649 acres. Pop 3,585,139, or, exclusive of London, 798,554.

**Middleton**, a town of Lancashire, England, 6 m by rail N N E of Manchester, with coal and chemicals, and weaving of cotton and silk. Pop 25,178

**Middlewich**, a town of Cheshire, England, 21 m E of Chester, on the Trent and Mersey Canal, with manufactures of salt (less important than formerly), chemicals, and condensed milk. Pop 4669.

**Midi, Canal du**, one of the great inland canals of France, passes through the departments of Haute-Garonne, Aude, and Hérault, between Toulouse and Cètte, connecting the Garonne with the Mediterranean Sea. Total length, 150 m.

**Milan**, a large city of North Italy, in the plain of Lombardy, 80 m N E of Turin and 155 W. of Venice, and 847 (rail, &c) from London, great railway and canal centre, and owing to its command of the Alpine passes, and especially of the St Gothard Railway, a place of very great importance in connection with transit trade to the centre and N of Europe, receives and distributes raw silk, cotton, grain and other food-stuff, and has manufactures of woollen cloth, silks, velvets, gold and silver work, iron ware, and railway carriages. Letters, 1 $\frac{1}{2}$  days, parcels, 3 days. British consul. Pop 498,000

**Milazzo**, a port on the N. coast of Sicily, Italy, 20 m W of Messina, harbour takes vessels up to 20 ft, imports coal and grain; exports tunnies, wine, fruits, and olive-oil. British vice-consul. Pop 14,000

**Mildura**, an irrigation settlement of Victoria, Australia, on the Murray River, 370 m N W of Melbourne. The amount of land irrigated is over 15,000 acres, and this is planted with vines, citrus and other fruit trees, lucerne, &c, fruits used for preserves, and also sent out dried and canned. Pop of town and district, 3500

**Milford Haven**, one of the best of the British natural harbours, in Pembrokeshire, Wales, 12 m. long, 1 to 2 m wide, and 15 to

19 fathoms deep; finely sheltered entrance about 2 m wide. The port of Milford, on the N. side about 7 m up, is 271 m by rail W of London, or via Severn tunnel, 260, wet dock, with an area of 20 acres, 34 ft at the entrance at high water of spring tides and 28 ft at high water of neap tides, dry dock 600 ft. long, fish market, ice works, cold storage, has a considerable amount of fish, passenger, and cattle, traffic with Cork and Waterford, and will probably, sooner or later, have a considerable American trade, owing to its position giving a shorter Atlantic passage. Distance to Halifax, 2360 m, Quebec, 2690, St John, 2610, Liverpool, 190, Glasgow, 295. Pop 5101.

**Millau**, a town of the department of Aveyron, centre S France, on the Tarn, 50 m N W. of Montpellier, with coal, trade in wool, wool-spinning, and manufacture of gloves and leather. Pop. 19,000.

**Milom**, a town of Cumberland, England, 30 m S S E of Whitehaven, with blast-furnaces and mines of very rich iron ore, harbour with depth of 20 ft. at high water of spring tides and 12 ft at high water of neaps. Pop 10,426.

**Milwaukee**, a large town of Wisconsin, United States, on the W. shore of Lake Michigan, 85 m N by W of Chicago, on Milwaukee Bay, and at the mouth of the Milwaukee River. Largest of the ships that navigate the Lakes can reach the quays in the centre of the town. Imports coal, lumber, ore, and general goods; and exports oats, barley, maize, wheat, rye, and flour. Great manufactures of engines and other machinery, brass and iron ware, pig-iron, agricultural implements, flour mills, breweries, meat-packing and sausage establishments, ready-made clothing, railway works, great centre of railways and Lake shipping. Part of the bay has been shut off by a breakwater, and forms a harbour of refuge. Pop 285,500.

**Minas Geraes**, one of the interior states of Brazil, plateau in the W, mountainous elsewhere, reaching a height of some 5900 ft, coffee, sugar-cane, cattle, &c, valuable mineral deposits and many mines, gold, diamonds, iron, and lead. Area, 221,890 m. Pop 3,184,000.

**Minch**, the part of the sea between the island of Lewis and the mainland of Scotland, with a breadth of from 24 to 40 m, and very rapid currents. The continuation of it to the S W, between Harris, North Uist and Skye, and known as the Little Minch, is from 14 to 20 m wide.

**Mincio**, a northern tributary of the Po, with a length of 110 m, supplying water for a number of irrigation canals.

**Minden**, a town of Westphalia, Prussia, on the Weser, 40 m W of Hanover, large river trade, manufactures of woollen and linen cloth, tobacco, beer, and spirits, &c. Pop 24,500.

**Minneapolis**, a town of Minnesota, United States, on the Mississippi. The falls of St. Anthony, 16 ft. high, afford an enormous water-

power, which has enabled the town, situated as it is in the midst of a great wheat producing district, both in Canada and the United States, to become the centre of an immense trade in wheat and flour, the latter being manufactured by the "roller" process. Pop 203,000.

**Minnesota**, one of the centre states along the northern border of the United States, surface flat (Red River valley) or undulating, rising from 650 ft on the S to nearly 1700 ft on the N E, in N great forests of pine, with oak, maple, and ash farther to the S, in S and S E and all along Red River valley rich prairie land, producing fine and heavy crops of wheat, flour mills, lumber and wooden goods, leather, boots and shoes, to the N of Duluth valuable mines of rich iron ore, particularly suitable for steel making, for which purpose it is sent to the furnaces of New York, Pennsylvania, Ohio, and Illinois, communication with the Gulf of Mexico by means of the Mississippi, and by Duluth to the Lakes, and thence to the Atlantic. Area, 79,205 m. Pop. 1,751,500.

**Minorca**, one of the Balearic Islands (35 m. by 17) in the Mediterranean, off the S E coast of Spain, 24 m W of Majorca (which see), plains in centre rising to low hills in the N. (greatest height, 1150 ft), products similar to those of Majorca. Area, 284 m. Pop 42,000.

**Miquelon, Great and Little**, two islands off the S W coast of Newfoundland, forming along with St Pierre the only remnant of French dominion in North America, cod fishing, and exports of cod and cod-liver oil. Parcel post, under 3 lbs, 2s, between 3 and 7, 2s 6d, between 7 and 11, 3s. Pop 4000.

**Mirfield**, a town of the West Riding of Yorkshire, England,  $4\frac{1}{2}$  m N E of Huddersfield, with manufactures of woollen cloth, carpets, and blankets. Pop 11,346.

**Mirzapore**, a district with a chief town of the same name in the North West Provinces, India, on the right bank of the Ganges, 45 m. by rail W S W of Benares, with manufactures of carpets, shellac, brass ware, &c. Area of district, 5223 m. Pop 1,162,000, pop of town, 80,000.

**Misiones**, a territory of the Argentine Republic, in the extreme N E between the Parana and Uruguay rivers, mountainous, sugar-cane, forests with dye-woods, medicinal herbs and maté. Area, 20,823 m. Pop 33,000.

**Mississippi**, a great river of North America, rising in Lake Itasca, in Minnesota, in the N. of the United States, some 1560 ft above sea-level, and having a course of over 2600 m to the Gulf of Mexico, and a drainage basin of nearly 1,240,000 m, or over 40 per cent. of the area of the whole United States. The chief tributaries from the W are the Minnesota, the Des Moines, Missouri, Francis, White, Arkansas, and Red Rivers, and on the E the

Wisconsin, the Illinois, Ohio, and the Yazoo. The breadth at Lake Itasca is about 15 ft. and the depth about 2, and from this the width increases to 1200 ft. at the Falls of St. Anthony (Minneapolis), 5000 ft. at the mouth of the Missouri, 4500 below the mouth of the Ohio, narrowing again to 3000 at the mouth of the Red River, and to 2500 at New Orleans. Below the Ohio the depth is from 75 to 130 ft. On either side are rich alluvial "bottoms" of large extent, and at many points underlying the ordinary level of the river, which is prevented from overflowing them by strong embankments known as *levées*. At many parts of its course the channel is constantly shifting, and the banks are eaten away, or "cave in." At the mouth there is a large delta with many passages, one of which at the south pass is now kept, by means of a system of jetties, at a depth of over 30 ft., and the Government are also extending and improving the system of *levées* all along the river, so as to maintain a more uniform depth, and prevent damage to the districts which suffer from floods, and which have a total extent of over 40,000 m. There is a great river traffic carried on by specially constructed steamers as far up as the Falls of St. Anthony, 392 m. from the source.

**Mississippi**, one of the southern states of the United States, on the E. side of the lower part of the Mississippi, and with a coast line of 90 m. along the Gulf of Mexico. Surface flat along the coast, rising to low hills never more than 800 ft., drained by Mississippi, Tennessee, &c., in S. yellow pine, among hills oak, hickory, and other hard woods, and cypress in the swampy grounds, very heavy crops of cotton and large amount of grain and rice, figs, oranges, and other fruits, wool and pork; trade in lumber and cotton-seed oil. Area, 46,340 m. Pop. 1,551,500.

**Missouri**, a large river of the N. W. United States, chief tributary of the Mississippi, the joint streams having a total length of 4200 m. Rising in the Rocky Mountains, the Missouri is formed by the union of the head streams of the Jefferson, Gallatin, and Madison, and has, a little over 520 m. from its source, a drop of over 300 ft. in the course of 15 m., the principal falls having a height of 87 ft. Below this it has a breadth of some 1500 ft., and this gradually increases till at the junction with the Mississippi the width is about 3000 ft. The total length of the Missouri itself is about 3000 m., and it joins the Mississippi about 1260 m. from the Gulf of Mexico. From the N. it receives the Dakota, and from the S. the Yellowstone, Little Missouri, Cheyenne, White River, Platte River, Kansas, and Osage. The navigation is difficult, and the spread of the railway system along its banks is gradually putting an end to traffic by river. Area of basin about 520,000 m.

**Missouri**, one of the E. central of the United States; bounded on the E. by the Mississippi, and divided a little N. of the centre by the Missouri; N. flat or undulating; to the S. of the Missouri the Ozark Mountains reach a height of some 3000 ft., prairie in the W.; the Mississippi has a course of over 550 m. along the border; soil deep and fertile, producing heavy crops of maize, wheat, oats, hemp, flax, cotton, tobacco, and fruit; cattle, pigs, and sheep reared for bacon and preserved meats, valuable deposits of iron ore in the E. centre, and of coal in the N. centre, while in the S. W. are important deposits of zinc and lead. Area, 68,735 m. Pop. 3,107,000.

**Mitau**, a town of Courland, Russia, 27 m. by rail S. W. of Riga, with trade in grain and timber. Pop. 35,000.

**Mitcham**, a district in Surrey, England, 1 m. by rail N. W. of Croydon, with market gardens, cut flowers, and rearing of roses, lavender, &c., for manufacture of essences.

**Mittweida**, a town of Saxony, Germany, 12 m. by rail N. by E. of Chemnitz, with well-known technical schools for machinery and weaving work, linen, woollen, and cotton, manufactures. Pop. 16,600.

**Mitylene**, an island of Turkey-in-Asia in the N. W., in the Archipelago; very irregular in shape, some 35 m. in greatest length and breadth; interior hilly, rising to over 3000 ft., upper districts covered with timber; lower grounds produce olives, grapes, figs, &c., considerable manufacture of olive-oil and soap, and export of valonia, imports British cottons and machinery but not directly, and Belgian, Austro-Hungarian, and German, bar and sheet iron. The chief town of the same name is on the E. coast with a shallow harbour. Of over 600,000 tons, entered and cleared, about 12 per cent are British. British vice-consul. Area of island, 675 m. Pop. 132,000. Pop. of town, 20,000.

**Mobile**, a port of Alabama, United States, 140 m. by rail E. N. E. of New Orleans, at the head of Mobile Bay, 30 m. up from the Gulf of Mexico, vessels drawing 23 ft. can cross the bar at any time, and there is a depth of over 21 ft. alongside the quays, great southern port for trade with Cuba; imports (total value about £600,000), salt and general goods, exports (total average value over £3,500,000), cotton, lumber and timber (mostly pine, but also oak and poplar), meat products and live stock, maize and flour, and vegetables. Of over 1,000,000 tons, entered and cleared, about one-third are British. The bay has a length of 30 m., a width of from 10 to 12 m., and an entrance width of 3 m. British vice-consul. Pop. of town, 38,500.

**Mocha**, a port of Yemen, Arabia, on the Red Sea, 100 m. W. N. W. of Aden. It gave name to Mocha coffee, which used to be largely ex-

ported from the place, but which now goes instead to Hodaida Pop about 5000

**Modena**, chief town of a province of the same name in northern Italy. The town is 23 m by rail N W of Bologna, with manufactures of woollen and hemp fabrics, leather, glass, silk, and vinegar Area of province, 987 m Pop 323,000, pop. of town, 65,000

**Mogador**, a seaport on the W coast of Morocco, 130 m W S W of the town of Morocco; manufactures olive-oil and flour, anchorage in open bay a third of a mile to one m off shore, in from 3 to 4½ fathoms, depth of bay at entrance about 7 fathoms, quay for very small vessels; imports (total value about £250,000), cottons, woollens, tea, sugar, candles, hides, hardware, and general goods of every kind, exports (total value about £400,000), almonds, goat skins, olive-oil, beeswax, gums, calf skins, eggs, beans, sheep skins, and wool, of the imports the British Empire sends over half, and of the exports it takes less than one-third Of nearly 150,000 tons, entered and cleared, about 40 per cent are British Regular communication from London. British vice-consul Pop 16,000

**Moghilev**, a province of Russia, with a chief town of the same name on the upper Dneiper, surface low and marshy, undulating up to 900 ft The town, 95 m. N W of Smolensk, has manufactures of leather, and a river trade in grain, leather, spirits, salt, skins, and timber. Area of province, 18,551 m Pop 1,708,100, pop of town, 43,500

**Mohacs**, a town of Hungary, 55 m W S W of Maria Theresiopel, on the Danube, with a large river trade in wine, coal, and timber and agricultural products Pop 16,000

**Mohammerah**, a port of W Persia, near the top of the Persian Gulf, on the Haslar Canal, connecting the Shat-el-Arab with the Karun, imports (total value nearly £250,000, one-third from United Kingdom, and about same from India), cotton goods (over half), sugar, coffee, tea, gunny bags, wheat, petroleum, metals and metal ware, &c; exports (£150,000, one-eighth to the United Kingdom, and half to India), horses, opium, piece goods (transit), dates, wool, gum, oil-seeds, and mules Of 200,000 tons, entered and cleared, almost all are British Trade increasing since the Karun was made navigable British vice-consul Pop 5000

Mollendo, a port in N of Arequipa, Peru, with

20 m to the N opposite Melnik, after a course of about 270 m, important for navigation

**Molfetta**, a port on the E side of Apulia, S Italy, 16 m by rail W N W of Bari, harbour exposed to W, 13 ft alongside quay, imports coal, iron, and general goods, exports wine, olive-oil, almonds, &c Pop. 32,000

**Mollendo**, a port of Arequipa, Peru, with an open and unsafe anchorage, 490 m by sea S E of Callao, terminus of Mollendo-Arequipa-Puno (Lake Titicaca) railway (346 m), and with another railway from Guaquin on Lake Titicaca to La Paz in Bolivia, exports (total value £700,000), alpaca wool, copper, barilla, gold and silver, rubber, borax, ordinary wool, copper ores, bark, silver ore, and tin, all to the United Kingdom, copper, barilla, and hides, to France; and coca leaves, cocaine, and hides, to Germany Of 1,200,000 tons, entered and cleared, over half are British Regular communication from London. British vice-consul Pop 3000

**Moluccas**, or **Spice Islands**, a group belonging to Holland in the E of the Malay Archipelago, between New Guinea and Celebes, and to the S of the Philippines, volcanic; hilly, reaching heights of nearly 10,000 ft Although the islands lie under the equator the heat is tempered by the sea breezes, and the height of a considerable portion of the land above sea-level, rainy season from May to October, with N E. winds, rest of season dry, with W wind, rainfall reaches as high as 150 in. Sago palms, dammar pine, cajuput, cloves, and nutmegs Chief islands, Jilolo, Ternate, Tidore, Buru, Ceram, Amboina, Banda, Sulu, and Timor. Area about 28,000 m Mails as for Java; parcels under 3 lbs, 3s, between 3 and 7, 3s 6d, between 7 and 11, 4s Pop estimated at 600,000

**Mombasa**, a port, chief town of British East Africa, on the N side of a small coral island, 3 by 2½ m, about 150 m N of Zanzibar Short railway across the island, on the mainland opposite is the coast terminus of the Uganda railway to Port Florence on Lake Victoria Nyanza. There are excellent harbours at Mombasa itself and at Kilindini on the opposite side of the island connected by railway The latter is the depot for the British East Africa squadron That at Mombasa is well sheltered and can take vessels up to 30 ft Imports cotton goods, wire, beads, and African trade and general goods

**Monaghan**, a county of Ulster, Ireland ; surface hilly. Town of the same name, 76 m by rail N N W of Dublin, has trade in linen and agricultural produce, particularly pigs and cheese. Area of county, 318,806 acres, of which fewer than half are under cultivation. Pop 74,611, pop of town, 2932

**Mona Passage**, the opening from the Caribbean Sea to the Atlantic between Hayti and Porto Rico 80 m wide

**Monmouth**, a coast county with a chief town of the same name on the Severn estuary, S W England, surface flat along coast, elsewhere hilly, rising in N. and N W. to heights of nearly 2000 ft, rich deposits of coal and iron about Newport, Pontypool, Nantyglo, Tredgar, and Ebbw Vale, grazing, wheat, and orchards. Town at the junction of the Monnow and the Wye, 26 m by rail W S W of Gloucester, has smelting and tin-plate works. Area of county, 341,688 acres. Pop 292,327, pop of town, 5095.

**Monongahela**, a river of West Virginia and Pennsylvania, joining with the Alleghany to form the Ohio, flowing through a rich coal district.

**Monreale**, a town of Sicily, 5 m S W. of Palermo, centre of famous orange, almond, and olive, district. Pop 15,000

**Mons**, the chief town of Hainault, Belgium, on the Trouille, 38 m S S W of Brussels, and with canal communication to the Scheldt, centre of important coal and iron district, with manufactures of glass, wool and cotton goods, sugar, oil, chocolate, and cutlery. Pop 25,500

**Montana**, a state of the United States, in the N W, south of the Canadian border, and extending from the western ridge of the Rocky mountains eastwards to 104° W, surface undulating prairie, rising westward to the Rocky Mountains, the main ridge of which reaches in its highest point nearly 12,000 ft; agriculture possible by means of irrigation, for which purpose artificial reservoirs have been constructed; grazing and stock-raising, important deposits of copper, gold, silver, and lead, the output of copper especially being very large. Coal is also found, iron ore, and antimony. The slopes of the Rocky Mountains yield timber (pine, fir, cedar), and there are many flour mills. Area, 145,310 m. Pop 243,500

**Montargis**, a town of the department of Loiret, centre France, 47 m E by N of Orleans, with good canal communication, manufactures paper, and india-rubber goods. Pop 12,500

**Montauban**, a town of the department of Tarn-et-Garonne, S W France, on the river Tarn, 30 m N of Toulouse, with a trade in wine, fresh fruits, vegetables, and leather; and manufactures of heavy woollens and moleskins, and silk yarn. Pop 30,500

**Mont Cenis**, a mountain (11,792 ft), and a pass (6835 ft), on the borders of France and Italy, tunnel (7½ m long), giving communication from north-western Europe to Brindisi and the East

**Mont-de-Marsan**, chief town of the department of Landes, S W. France, 90 m by rail S of Bordeaux, with manufactures of chemicals. Pop 12,000

**Montélimar**, a town of the department of Drôme, S W France, 85 m by rail S of Lyons, centre of coal district, with manufactures of silk yarn and hats. Pop. 13,500

**Montenegro**, a small principality on the W. side of the Adriatic—the smallest independent state in Europe—with the Herzegovina on the N.W, the sanjak of Novibazar (nominally Turkish) on the N E, Turkey on the S E, and the extremity of Dalmatia and the Adriatic on the S W. The extreme length is about 100 m, the width about 78, and the area 3630 m. The coast line measures about 30 m. The surface is everywhere mountainous, rising in the centre, W, and N, to a barren stony plateau 5000 ft. above sea-level, and reaching an extreme height of over 8140 ft. On the E the average elevation is somewhat lower, and there is a narrow coastal strip with valleys opening off it. The E part has extensive forests of beech, oak, and pine, and the sheltered valleys produce apples, pears, plums, grapes, tobacco, maize, &c, while along the coastal strip and the valleys opening off it are grain, grapes, olives, figs, mulberries, and almonds. Large numbers of sheep and goats, cattle, swine, and horses. The timber is of no value owing to the want of roads. The imports are chiefly salt, petroleum, hardware, and general goods, and the leading exports sumach, live stock, smoked mutton, cheese, wool, hides and skins, honey, wax, olive-oil, wine, and tobacco. There are one or two good roads, but over most of the country communication is by bridle paths. A railway is to be constructed for about 100 m, from Antivari to Nicksics, to permit of export of iron ore. There is practically no trade with Great Britain. The government is nominally a limited monarchy, but of the legislative State Council of eight members four are nominated by the Prince. Mails from and to London every day, letters, 2½d per half-oz, postcards, 1d, parcels, *vd* Hamburg, under 3 lbs, 2s 3d, between 3 and 7, 2s 9d., between 7 and 11, 3s 3d, *vd* Cologne, 3d more in each case, money orders to and from, telegrams, 4d. a word. Pop 228,000

**Monterey**, a town of N E Mexico, on the San Juan River 180 m up from its junction with the Rio Grande, silver mining. British vice-consul. Pop 46,000

**Montevideo**, the chief town of Uruguay, South America, on the N side of the Rio de la Plata, 124 m E by S of Buenos Ayres. Ex-

poed and somewhat dangerous roadstead, and vessels up to 21 ft. can anchor in the outer road, and those of 17 to 18 in the inner harbour, docks being constructed and harbour deepened to 26½ ft. It is the outlet for all the chief productions of Uruguay and the main inlet for imported goods. Imports cotton and woollen cloth, hardware, coal, and general goods of every kind; exports wool, skins and hides, horse-hair, grease, tallow, pickled beef and beef extract, bones, horns, and bone ash, &c. Letters, 21 days. Regular communication from London, Liverpool, Southampton, Glasgow, and Newport (Monmouth). Distance from London, 6170 m., Liverpool, 6100, Glasgow, 6200. Cardiff, 5320. British consul general. Pop 170,000.

**Montgomery**, a county of North Wales, with a chief town of the same name, hilly on borders, rising to nearly 2500 ft., lead, zinc, and slate; manufactures of flannel and other woollens, sheep grazing on higher grounds. The town does not call for particular notice. Area of county, 510,111 acres. Pop 51,892; pop of town, 1031.

**Montgomery**, a town of Alabama, United States, on the S bank of the Alabama River, 160 m by rail N.W. of Mobile, river communication for largest steamers, railway centre, with manufactures of cotton, cotton seed oil, flour, and iron ware, and large export of cotton. Pop 30,500.

**Montluçon**, a town of the department of Allier, centre France, on the Cher, 60 m by rail N.N.W. of Clermont, with coal in neighbourhood, and with blast-furnaces, iron works, and manufactures of chemicals, plate-glass, and machinery. Pop 25,000.

**Montpellier**, the chief town of the department of Hérault, S France, on the Lez 6 m from the sea, and 17 m. N.N.E. of Cette, centre of wine district, with a school of agriculture devoted specially to the study of vines and silk-worms. Pop 76,000.

**Montreal**, a port in the province of Quebec, Canada, and the commercial centre of the Dominion, on the E side of the island of Montreal, in the St Lawrence, at the head of the deep-sea navigation of the river, 250 m. up, and about 1000 m from the open sea, railway and canal centre, with railway works, and manufactures of boots and shoes, clothing, tobacco, rubber goods, woollens, cottons, and silks, saw mills, sugar-refining, and iron-founding. The St. Lawrence is crossed by the Grand Trunk Railway on the Victoria Tubular Bridge, which has a central span of 350 ft and a total length of 3428 yards. Distance by rail from Halifax, 756 m., Quebec, 172, New York, 384, Boston, 341, Portland (Maine), 286, and Vancouver, 2906. The railways and canals enable the place to command the trade of a far-reaching tract of country, the latter in particular opening up the whole of the districts

round the Great Lakes, and so a considerable part of the United States, and completing water communication from the Atlantic to the top of Lake Superior, a distance of over 2250 m. The ship channel of the St. Lawrence has a depth, except at one or two points, of 27½ ft at low water, quays have an extent of over 6 m; navigation open from about third week of April to about last week of November. Imports coal, iron, salt, cement, and general goods of all kinds, exports wheat, maize, oats, rye, barley, peas, flax seed, flour, meat (fresh, salt, and canned), cheese, butter, eggs, apples, canned fish, fruits, and vegetables, cattle and other live stock, pot and pearl ash, timber, phosphate of lime, copper and silver ore, &c. The imports are valued at some £10,000,000, and the exports at nearly £10,000,000. The tonnage entered and cleared, is about 1,400,000, of which the bulk is British. There is regular communication in the season with practically all the leading ports of Great Britain. Distance from London, 3100 m; Liverpool, 3025; Glasgow, 3135, Tyne, 3380; Cardiff, 2920. Letters, 9 days. Pop 268,000.

**Montrose**, a port of Forfarshire, Scotland, at the mouth of the South Esk, 90 m by rail N.N.E. of Edinburgh and 41 S.S.W. of Aberdeen; spinning and weaving of flax and hemp, rope-making, trade in timber; fish curing, depth in dredged channel 22 ft at high water of stream tides, and 17½ ft at high water of neap tides, wet dock with a depth on sill of 19½ ft at high water of stream tides, and 15 ft at high water of neap tides, deep water berth with 20 ft. at low water of stream tides, and dredged berth in the river with 20 to 22 ft. at low water of stream tides; imports flax, hemp, and timber, exports sailcloth and other coarse fabrics, preserved fish, and agricultural produce. Pop 12,427.

**Montserrat**, one of the British West Indies (Leeward Islands), 27 m S.W. of Antigua, 11 m. long and 7 wide at the broadest part, rises from the coast to a height of 3000 ft towards the S end, considerable amount of timber; production of sugar-cane, limes and lime-juice, and the cultivation of coffee and cocoa has been begun, climate healthy, exports sugar, lime-juice, &c. The total value of imports is about £20,000, of which more than a quarter comes from the United Kingdom, and over three-fifths from British Colonies. The total value of exports has fallen much in recent years, about two-thirds of the articles are sent to the United Kingdom and its colonies. Vessels anchor in an open roadstead in 5 fathoms, and are loaded and discharged by lighters. Regular communication from London. Mails from and to London every fortnight, letters, 1d, post-cards, 1d, parcels, not over 3 lbs, 1s, between 3 and 7, 2s, between 7 and 11, 3s; letters, 14 days. Area, 32½ m. Pop 12,500.

**Monza**, a town of Lombardy, Italy, 9 m by rail N N E of Milan, with manufactures of cotton, silk-yarn, and hats, and with dye-works Pop 19,000

**Moradabad**, a town of the N W. Provinces, India, in a district of the same name on the Ramganga, 100 m. E by N of Delhi, inlaid brass and other metal work. Area of district, 2282 m. Pop 1,180,000, pop of town, 75,500.

**Moravia**, a division of Austria-Hungary, in the N, lying to the S E of Bohemia, mountains along the border, reaching to over 4000 ft, excepting in the S, grain, beet-sugar, and fruit, including grapes and plums, extensive forests along the mountain slopes; in the centre and N E large deposits of coal, and there are also considerable quantities of iron and graphite, manufactures woollen, linen, and cotton, cloth, glass, and paper. Area, 8583 m. Pop 2,438,000

**Moray Firth**, a great opening in the N E. of Scotland, between Kinnaird's Head in Aberdeenshire and Duncansbay Head in Caithness, a distance of nearly 80 m, while the length from this line to the head of the Firth at Beaulieu, beyond Inverness, is about 95 m The depth near the mouth is about 60 fathoms, but the upper parts are much shallower, and towards the extreme W end, W of Inverness, large portions of the bed are laid bare at low water The name is sometimes taken as having a much more limited meaning, and is confined to the part extending from a line between Tarbet Ness in Ross-shire and Stotfield in Elginshire (a distance of 21 m) to Beaulieu as before, the distance from E to W. being, in this case, about 39 m.

**Morbihan**, a coast department of N W France, with a much-indented coast-line of over 90 m along the N side of the Bay of Biscay, undulating plateau reaching a height of nearly 980 ft, great production of apples for the manufacture of cider, large amount moorland, and along the coast very extensive marshes from which large quantities of salt are obtained, fishing and oyster-beds along coast Area, 2625 m Pop 563,500

**Morelia**, the chief town of Michoacan, Mexico, 234 m by rail W by N of the city of Mexico, in a valley over 6000 ft. above sea-level, centre of sugar-producing district, with manufactures of cotton and tobacco Pop 34,000

**Moresnet**, a small district on the borders of Belgium and the Rhine province of Prussia—5 m. S W of Aix-la-Chapelle, with important zinc mines.

**Moreton Bay**, a large inlet, about 40 m long by 17 broad, at the mouth of the Brisbane River, on the E coast of Queensland, Australia; vessels drawing 19 to 21 ft can pass up and down at all times, and those of 24 ft can reach quays at high water of ordinary stream tides, dry dock 430 ft, with depth on sill at high

water of 20 ft; imports iron, machinery, general goods; exports live stock, frozen mutton, wool, hides, tallow, canned meats, gold, silver, tin, copper, pearl-shell, fruit, and coal

**Morlaix**, a port of the department of Finistère, N W France, on the Dou-en, 6½ m from the sea, and 38 m E N E of Brest, depth of dock about 15 ft. at high water of ordinary tides; imports (about £150,000—nearly one-fourth from United Kingdom), coal, clay, and earthenware, and exports (about £5000, almost entirely to Great Britain), cattle, butter, pork, eggs, and vegetables Pop 16,000

**Morley**, a town of the West Riding of Yorkshire, England, 5 m S W of Leeds, centre of coal-mines and sandstone quarries, and with manufactures of woollen-weaving machinery and woollen cloth. Pop 23,638

**Morocco**, an independent state in the N W corner of Africa, separated from Europe by the Strait of Gibraltar, and bounded N by the Atlantic and Mediterranean, N E and S E and S by Algeria and French Africa, and N.W. by the Atlantic, but the limits inland are not clearly defined, though the area is estimated at 219,000 m The country is traversed from N E to S W by the Atlas Mountains, which reach an extreme height of from 13,000 to 15,000 ft, and the parallel chains of these with their foot hills and offshoots spread out so widely as to render the surface hilly, as a rule, almost everywhere. This is especially so in the N The drainage is carried off by the Muluya and many other smaller streams flowing to the Mediterranean, and by the Sebu, Bu Regreg, Um er Rebia, Tensift, Sus, and a large number of smaller streams flowing to the Atlantic, but they are all practically useless for navigation, and while many of them dry up in summer, in winter they become so swollen as to be dangerous to cross The rivers flowing S from the Atlas are lost in the marshes in the desert The climate of the districts N W of the Atlas is healthy and pleasant, the mountains affording shelter from the hot winds from the great desert, while cool breezes come in from the Atlantic Except in sheltered valleys the temperature ranges mostly between 40° and 80° Fahr, and in the higher districts snow in winter is by no means rare There is a considerable rainfall between October and March, but the rest of the year is dry To the S E of the Atlas there is but little rain, and sometimes a long continued drought, or a succession of almost rainless years, causes wide-spread distress and severe suffering from famine, even along the fertile border oases Between the northern hill region—Riff—along the Mediterranean and the Atlas, and extending westward to the Atlantic, is the fertile Tell district, covering over one-third of the whole area, and producing, wherever tilled, heavy crops of wheat,

barley, maize, hemp, olives, figs, almonds, grapes, oranges, lemons, dates, cotton, &c. On the pasture land, which covers probably one-eighth of the whole area, considerable numbers of cattle, goats, sheep, horses, and mules are reared. There seems to be a considerable amount of minerals—silver, gold, silver-lead, manganese, copper, antimony, &c—but Europeans are carefully prevented from even visiting such mines as exist. There is some weaving of carpets and rugs, as well as making and manufacture of leather (saddles, harness, slippers), inlaid long-barrelled flint-lock guns, brass trays, and rough woollens. What the country needs are good roads and the leavening of the people with new ideas, both seemingly, meanwhile, possible only in the very slowest way. Were the present foot or mule tracks replaced by good communications, and the people induced to adopt modern methods of cultivation, the country might produce enormous quantities of grain, and with proper development the minerals ought to be of considerable value. "The trade to be done," says a recent writer, "for the immediate necessities of the people—cottons, coal, timber, furniture, hardware, petroleum, sugar, tea, and tobacco—is considerable, larger still is the work by which commerce will be possible. Every river cries aloud for bridges, or, to be accurate, the travellers on the banks cry for them in the rainy season, when a man must oft-times spend a fortnight in camp before the streams become fordable in safety. Railway lines are to be built through a virgin land, towns can have the best positions chosen for them. There are no errors to repair, no costly experiments to regret, no fruitless labour to be taken all over again." First, however, must come the desire of the people that such things should be, or at least the willingness to allow them to be placed within their reach. The chief imports (total value of about £1,700,000, of which over half comes from the British Empire) are cottons, woollens, sugar, tea, hardware, and candles; and the chief exports (total value about £1,700,000, of which a little less than one-third goes to the British Empire), almonds, beans, wool, goat-skins and sheep-skins, eggs and fowls, wax, hides and bones, olive-oil, hemp-seed, dates, gum, esparto, a little wheat (under special imperial permit), and cattle (under special treaty, to Gibraltar). The total trade with Great Britain alone is valued at about £1,400,000, the leading imports from the United Kingdom being cottons, woollens, tea, candles, and iron, and the leading exports to the United Kingdom eggs, almonds, beans, goat-skins, seed, barley, olive-oil, gum, wool, and wax. The Sultan's rule is absolute. Spanish dollars are in use as well as Moorish coins, the mital = 10 ounces = 40 blankels = 240 floos = slightly over 3d. The kantar of

the ports = 112 lbs. British consul at Dar-al-Baida, and a number of vice-consuls. There are mails to and from London *via* France and Spain every day; letters 2½d per half-oz; postcards, 1d, parcels (certain places only) not over 3 lbs, 1s, between 3 and 7, 2s; between 7 and 11, 3s, telegrams, Tangiers, 5d a word, other places, 3½d. Pop estimated at 9,500,000.

**Morocco**, a town to the S W of the centre of the country just described, the southern capital, commanding the southern trade routes across the Atlas, and with a leather-making industry. Pop estimated at 60,000.

**Morpeth**, a town of Northumberland, England, 16 m by rail N of Newcastle-on-Tyne; great coal centre, with iron-founding, and manufactures of flannel, beer, and leather, in district. Pop 6158.

**Morpeth**, a town at the head of the navigation of the Hunter River, New South Wales, Australia, 30 m from Newcastle, and 120 m by rail N of Sydney, coal in neighbourhood, and centre of important agricultural district, butter, bacon, hams, cheese, vines, quays can be reached by vessels up to 13 ft. Pop 1300.

**Morshansk**, a town of Russia, on the railway between Tula and Samara, on the Tsna, with a river trade in grain, hemp-seed, and tallow. Pop 28,000.

**Moscow**, a town in a province of the same name in the centre of Russia, the old capital of the empire, on the Moskwa (a tributary of the Oka which flows to the Volga), 403 m by rail S E of St Petersburg, 967 N N E of Odessa, 770 E N E of Warsaw, about 1000 from Orenburg, and 2131 (rail, &c) from London. From its position it has an enormous transit trade, the principal articles dealt in being grain, timber, furs, cattle, hides, tallow, minerals from the Urals, cotton, woollen, and silk, fabrics, and provisions of all kinds. There are extensive manufactures of cotton, woollen, and silk, cloth, leather, metal ware, machinery, chemicals, paper, tobacco, carriages, candles, &c, the city being one of the most important industrial centres in Russia. There is a demand for British high-class cloth, bicycles, and guns, and British dealers should combine to have a general depot and agents. Letters take 3 days, parcels 6. The province has an undulating surface, nowhere rising above 850 ft, watered by the Oka and other tributaries of Volga; manufactures and trade those of the city. British consul. Area of province, 12,859 m. Pop 2,433,500, pop of town, 1,173,500.

**Moselle**, a tributary of the Rhine from the W, rising in the Vosges in France, and with a long winding course through France, Luxemburg, and the Rhine province of Prussia, to the Rhine at Coblenz; total length 315 m, of which over 200 m are navigable, principal

tributaries, the Meurthe, Saar, and Orne; whole river basin famous for light wines. Area of basin, 11,000 m

**Mossamedes**, a port of Portuguese West Africa, the chief town in the southern part of Angola, with a good harbour where vessels can load or unload at any state of the tide, communication inland by waggon

**Mossel Bay**, a port and bay on the S coast of Cape Colony, South Africa, 239 m E of Cape Town by land, and about midway between Cape Town and Port Elizabeth, outer anchorage in 7 fathoms, inner in from 3½ to 4; spring tides rise from 6 to 7 ft, vessels load and discharge by means of lighters, imports general goods, exports skins, wool, and ostrich feathers. Regular communication from London. Pop 2100

**Mossley**, a town of Lancashire, England, on the Tame, 3 m by rail S E of Oldham, with large manufactures of cotton and wool, foundries, machinery works, &c. Water communication by Manchester and Huddersfield Canal. Pop 13,452

**Mostar**, the chief town of Herzegovina, on the Narenta, 45 m S W of Sarajevo, and 35 m from the Adriatic, famous for wine and tobacco. Pop 14,500

**Mosul**, a town of Turkey-in-Asia, on the Tigris, 200 m N N W of Baghdad. It gave name to the fine cloth known as muslin, but the manufacture is practically extinct, and the only export of value nowadays is that of gall-nuts. British consular agent. Pop estimated at 40,000

**Motherwell**, a town of Lanarkshire, Scotland, 12½ m by rail S E by E of Glasgow, and 43 m W by S of Edinburgh, with extensive iron and steel works, boiler, bolt, and rivet works, fireclay works, &c. Pop 30,418

**Motril**, a port of S Spain, 32 m S by E of Granada, with an open roadstead, vessels load and discharge by means of lighters, the proper harbour being some 6 m to the S E, zinc, manganese, and quicksilver, mining, manufacture of sugar, imports coal, chemicals, and artificial manures, and exports esparto, and almonds and other fruits. British consular agent. Pop 17,000

**Moukden**, the chief town of Manchuria, China, 425 m N E of Peking, with trade in furs, and in European cottons and general goods, which reach it by means of Newchwang. Pop. estimated at 250,000

**Moulins**, the chief town of the department of Allier, France, 195 m by rail S S E of Paris, and 124 N W of Lyons, with manufactures of machinery, furniture, and straw and felt hats. Pop 22,500

**Moulmein**, a port on the left bank of the Salween, Lower Burma, ships up to 23 ft can enter at spring tide at any time, imports (total value about £1,000,000 a year), cotton

goods, hardware, sugar, cocoa-nuts, and general goods, exports (total value about £1,500,000), teak, rice, sapan wood, ivory, shellac, and betel-nut. Regular communication from London and Liverpool. Pop 58,500

**Mountmellick**, a town of Queen's County, Ireland, on the Grand Canal, and 7 m by rail N. of Maryborough; woollen manufactures, peculiar mixed linen and cotton fabrics with raised sewn ornament, known as Mountmellick work; tanning, bacon. Pop 2107

**Mount Morgan**, a town of Queensland, Australia, 28 m S S W of Rockhampton, with, on the summit of the mount, a famous gold mine, said to be the richest in Australia. The rock in which the precious metal is found is not quartz, but "a mass of drusy iron stone and silicious sinter" deposited by an extinct hot spring or geyser, but the gold is of unusual fineness and unprecedented purity. The annual yield at present is nearly £800,000. Pop 6500.

**Mount Perry**, a town of Queensland, Australia, 200 m N W of Brisbane, and 110 m by rail from Maryborough, important centre of country rich in iron, copper, gold, silver, lead, bismuth, and coal; famous itself for copper mine. Pop 350

**Moveille**, a town of Donegal, Ireland, on the W side of Loch Foyle, 19 m N N E of Londonderry, place of call for Atlantic steamers. Pop 3500

**Mozambique**, the Portuguese possessions in S E Africa, with German E Africa to the N, Rhodesia and British South Africa to the N W and W, and the Mozambique Channel on the S E. The coast, which extends for about 1300 m, is low and marshy, but from this the surface rises into forest-covered plateaux with valuable timber. Short railway (52 m) from Delagoa Bay to the Transvaal Colony. Deposits of gold, silver, coal, iron, and copper, practically undeveloped, and off the coast pearl-shell is found. Produces cotton, sesame, cocoa-nuts, india-rubber, and various medicinal plants, and something might be done to develop a trade in fibres (agave). Imports cotton fabrics, coal, hardware, and general and African trading goods, exports ground-nuts, copra, ivory, calumba-root, rubber, wax, coffee, and tobacco. The chief town, Mozambique, is on a small coral island where the coast changes its direction from N E to N, and has a total trade of about £150,000 a year, imports and exports are practically those of the colony, small harbour which takes vessels up to 25 ft, but they have to lie about ½ of a mile out, and load and discharge by means of lighters. Of 500,000 tons, entered and cleared, 60 per cent are German and 10 per cent British. British merchants other than British Indians do not push trade. For the Mozambique Channel, see Madagascar. Postage

letters, 2½d, postcards, 1d, mails from and to London every fortnight; telegrams, 3s 1d. a word Letters, 30 days Regular communication from London Distance from Zanzibar, 575 m.; Kiliman, 325 British cons-ul. Area of colony about 262,000 m Pop about 1,500,000, pop of town about 10,000

**Mühlhausen**, a town of the province of Saxony, Prussia, 25 m by rail N.N.W. of Gotha, with extensive manufactures of woollens and woollen yarn, and cottons and hosiery, and a trade in wool and grain Pop 33,500

**Muirkirk**, a town of Ayrshire, Scotland, on the river Ayr, 26 m by rail E by N of Ayr, with coal and iron mining, limestone quarries and large blast-furnaces Pop 3892

**Mulhausen**, a town of Alsace-Lorraine, 68 m. by rail S S W of Strassburg, and with water communication with the Rhone and Rhine by the Ill Canal; chief seat of cotton-spinning in W Germany, and with great print and dye works, manufacture of woollen and worsted yarn, silk, machinery, railway plant, iron works, chemicals, &c Pop 89,500

**Mulheim**, a town of the Rhine province of Prussia, on the Ruhr, 6 m S.W. of Essen, with important manufactures of cotton, leather, and iron, great coal centre Pop 38,500

**Mulheim**, a town of the Rhine province of Prussia, on the W bank of the Rhine, 3 m. N E of Cologne, with large manufactures of silk, plush, velvet, leather, wire rope and cables, &c. Pop. 45,000

**Mull**, a large island (30 m long by 25 broad) of the Hebrides, Argyllshire, Scotland, on the W coast, separated from the mainland by the Sound of Mull, which has a length of 19 m. and a breadth of 1½ to 3½ m; surface rugged, reaching an extreme height of 3185 ft, rearing of sheep and cattle Area, 224,802 acres Pop 4334.

**Multan**, a town of the Punjab, India, 190 m S W of Lahore, with carpet-making, weaving of silk and cotton, and manufacture of enamel work and glazed pottery Important centre for transit trade for Punjab Products (cotton, wheat, wool, sugar, indigo, and oil-seeds, and fruit, raw silk, spices, &c, from Afghanistan) are sent down the Indus valley to Kurra-chee, European goods being received and transmitted in return (cottons and general goods) Pop 87,500

**Munchen Gladbach**, a town of the Rhine province of Prussia, 16 m W of Dusseldorf, with important manufactures of cotton, iron founding, and machinery Pop 58,000

**Munich**, the chief town of Bavaria, Germany, on the Isar (tributary of the Danube) 440 m. by rail S S W of Berlin, 272 m W of Vienna, and 770 (rail, &c) S E of London, very large breweries, great railway centre, with a considerable trade in grain, important manufacture of stained glass, bell-founding, large litho-

graphic works, and making of optical and mathematical instruments, jewellery, gold and silver work. Letters, 1 day 2 hours; parcels, 1½ day. British cons-ul Pop 500,000

**Munkacs**, a town of Austria-Hungary, 101 m by rail N.E. of Debreczin, with mines of iron and alum, and the rock crystals known as "Hungarian diamonds" Pop 12,000.

**Munster**, a province of Ireland, in the S W, containing the counties of Clare, Cork, Kerry, Limerick, Tipperary, and Waterford

**Münster**, the chief town of Westphalia, Prussia, 101 m by rail N. by E of Cologne, with manufactures of cotton, machinery, and pianos Pop 64,000

**Murano**, an island with a town of the same name in the lagoon, 1½ m N of Venice, famous for the manufacture of Venetian glass. Pop. 3500

**Murcia**, a province, with a chief town of the same name, in S E Spain, with a coast line of about 90 m along the Mediterranean, mountains reaching a height of about 5200 ft, irrigation canals which supply water for oranges, mulberries, olives, and vines, large production of esparto grass; lead, zinc, coal, sulphur, mercury, alum, copper, iron, and manganese, salt deposits along the coasts, small manufacture of silk The town on the Segura is 50 m by rail N N W of Carthagena, and has manufactures of silk, saltpetre, gunpowder (Government), soda, and glass, and produces olive-oil Area of province, 4478 m. Pop 518,500; pop of town, 108,500

**Muroran**, a port of Yezo, Japan, opened specially for exports, and sending out coal to the value of about £90,000, and railway sleepers to the value of over £20,000, shipping, entered and cleared, about 220,000 tons, of which some 60 per cent. are British and 22½ Norwegian

**Murray**, the most important river of Australia, rising in the Australian Alps and flowing W and N between New South Wales and Victoria, thereafter entering South Australia, and reaching the sea by Lake Alexandrina at Encounter Bay 50 m S E of Adelaide Principal tributaries from the S, Goulburn and Loddon, from the N the Murrumbidgee and Lachlan, and the Darling The total length is about 1120 m, and it is navigable to Albury, 190 m. N E of Melbourne, largely used for irrigation Area of basin about 270,000 m.

**Murrumbidgee**, a great tributary of the Murray, with a course of about 1300 m, of which some 500 are navigable for small vessels Area of basin, 25,000 m.

**Murshidabad**, a town of Bengal, India, on a branch of the Ganges, 120 m. N. of Calcutta; trading centre, with ivory carving, gold and silver lace, embroidery, and silk-weaving Pop 29,000

**Muscat**, a seaport and the chief town of Oman, at the S E corner of Arabia, very hot

and unhealthy, anchorage about  $\frac{1}{4}$  m off shore in 5 to 6 fathoms, important centre of commerce between India, Arabia, Persia, and the African coast, with a total trade of about £1,000,000, imports coal, coffee, cottons, shawls, rice, almonds, aloes, nitre, wax, sugar, gums, and spices; exports the greater part of the articles imported, and also pearls, drugs, diamonds, hides, salt, fish, horses, and asses. Mails as for Aden, parcel charges as for India, letters, 20 days, parcels, 42, telegrams, *via* Turkey, 3s 3d a word, other routes, 2s 3d British consul. Pop 40,000

Muscatine, a city of Iowa, United States, on the right bank of the Mississippi, 210 m by rail W S W of Chicago, with large trade in timber and fruit, pork-packing, flour mills, wooden goods, &c Pop 14,500

Muskegon, a town of Michigan, United States, on the Muskegon River, the wide mouth of which is known as Muskegon Lake

## N

and forms an excellent harbour on the E side of Lake Michigan, great timber trade, iron-founding, machinery and boiler works, &c Pop 21,000.

Mysore, a native state of South India, with Bombay on the N.W and Madras round all the other sides. The surface is a great tableland (about 3000 ft), with deep ravines and hilly ground reaching a height of 4000 to 5000 ft. Produces ragi, millet, rice, oil-seeds, sugarcane, betel-nut, cocoa-nut palms, coffee, cardamoms, cinchona, and cotton. In the E gold is found. Railway communication with Madras and Bombay. The chief town, Mysore, lies 245 m W S W of Madras. Area of state, 29,444 m. Pop 5,539,500; pop of town, 68,500.

Mytholmroyd, a town of the West Riding of Yorkshire, England, on the Calder, 5 m by rail W. of Halifax, with spinning and weaving of cotton and wool, machinery, oil-refining, and the making of ready-made clothing. Pop 4103

Nagasaki, a port of Japan, on the W coast of Kiusiu, on a large sheltered inlet available for ships of all sizes, with a length of about 3 m and a breadth of from  $\frac{1}{2}$  m to 1 m, large dry dock and engineering works for repairs. In the neighbourhood are very large coal mines, of which that on the island of Takashima is the most important, and the place has consequently become a great coaling station for all the regular liners, it being always possible to obtain bunker coal at once. Of a total trade of over £2,000,000 (two-thirds imports), Britain has about 25 per cent, mostly imports of which it has 65 per cent. Imports iron and steel, lead, petroleum, oil-cake, raw cotton, and all kinds of manufactured general goods, exports coal, cuttle fish, dried fish and *bêche-de-mer*, tea, textiles, rice, paper, camphor, vegetable wax, tobacco, cotton yarn, provisions, mushrooms, lacquer ware, porcelain, and earthenware, &c. Of 4,000,000 tons, entered and cleared, 26 per cent are British. Regular communication from London, Liverpool, Southampton, Middlesbrough, Glasgow, Vancouver, Seattle, and San Francisco. Distance from London, 10,780 m, Liverpool, 10,705, Glasgow, 10,820, Cardiff, 10,600, Hong-Kong, 1070, Shanghai, 478 British consul. Pop 145,000

Nagoya, a town of Honshiu, Japan, 75 m E by N of Kyoto, with famous manufactures of porcelain and cloisonné. Pop 244,500

Nagpur, a town, in a district of the same name, in the Central Provinces, India, 450 m by rail E N E of Bombay, with weaving of cloth, and trade in grain, salt, and imported goods. Area of district, 3843 m. Pop 760,000, pop of town, 128,000.

Nailsworth, a town of Gloucestershire, England, 4 m by rail S of Stroud, with weaving of stockings and woollen cloth, and the making of dress shoes. Pop 3028

Nairn, a county of N E Scotland, on the S side of the Moray Firth, with a chief town of the same name, surface rises from coast (10 m) to a height of over 2150 ft, agriculture and sand-stone quarries. The town has a small harbour with some little trade in connection with fishing, but the place is best known as a summer resort. Area, 103,429 acres. Pop 9291, pop of town, 4487.

Namaqualand, Great, or Namaland, Deutsch-, the S part of German South-West Africa, N of the Orange River, with an area of some 460,000 m

Namaqualand, Little, the N.W corner of Cape Colony, very bleak and barren, but with rich copper mines at O'okiep

Namur, a province of Belgium, with a chief town of the same name, hilly, with wooded heights of the Ardennes, soil fertile, coal and iron. The town, at the junction of the Meuse and Sambre, 35 m by rail S E of Brussels, has important manufactures of iron and steel, cutlery, firearms, bronzes, glass, leather, paper, and tobacco. Area of province, 1414 m. Pop 347,000, pop of town, 32,500

Nanaimo, a town on the E coast of Vancouver Island, British Columbia, Canada, 74 m by rail or 60 m by water N N.W of Victoria, vessels up to 30 ft. can lie alongside quay, the depth at high water being from 40 to 45 ft., and at low water from 25 to 27 ft., coal in neighbourhood, imports general goods, exports coal, lumber, furs, skins, and salmon. Pop 6500.

Nancy, a town of the department of Meurthe-et-Moselle, on the River Meurthe, 220 m by rail E of Paris and 30 S of Metz; important manufactures of cottons and woollens (especially cambrics and muslin embroidery), iron, tobacco, artificial flowers, &c. Parcel post, 2 days. Pop 103,000

Nanking, or Nankin, the chief town of the province of Kiang-su, on the S bank of the Yang-tse-kiang 190 m up from the mouth at Woosung, and about 205 m W of Shanghai; manufactures of silk, satin, velvet, and cotton, imports (total value £360,000), cottons and cotton yarn, woollens, sugar, tobacco, copper, coal, soap, vegetable tallow, wood-oil, nut galls, and paper fans; exports (total value over £300,000), silk (raw, piece-goods, ribbons, &c.); goat, sheep, lamb, and dog, skins, fur rugs, hides, feathers, cotton, and ground-nuts. Of 2,600,000 tons entered and cleared, over 50 per cent are British. The making of the cloth known as nankin or nankeen seems never to have been a local industry, though the fabric was produced in the province. British consul Pop. estimated at about 150,000.

Nantes, a port of the department of Loire-Inférieure, on the N. bank of the Loire 35 m up, and 248 m by rail S W. of Paris; vessels up to 20<sup>1</sup> ft., imports (total value nearly £2,000,000), coal (United Kingdom), sugar (French Colonies, Egypt, and Mauritius), timber, wood-pulp, iron and steel, coffee and cocoa, wine (Algiers, Spain, Turkey), and general goods. Agricultural machines and implements are now mostly of French make, but in the imports the United States has taken the place largely of the United Kingdom, as the makers have adapted themselves to local requirements (as to general remarks see La Rochelle). Exports (total value nearly £600,000) are mainly sardines, refined sugar, salt, pit-props, charcoal, and brandy, a littleship-building, manufacture of machinery, sugar, leather, hardware, and nets. Regular communication from London, Glasgow, Hull, Bristol, and Manchester. British consul Pop 133,000

Nantwich, a town of Cheshire, England, on the Weaver, 4 m S W. of Crewe, with boot and shoe making, and brine works. Pop 7722

Napier, a town on Hawke's Bay, on the E coast of the North Island of New Zealand, 200 m. by rail or sea N E of Wellington, and 384 by sea S E of Auckland; good anchorage in the bay, but a little exposed in easterly gales; centre of a large pastoral district, with exports of wool, and tinned and frozen meat. Regular communication from Liverpool. Pop 9000

Naples, the chief town of the province of the same name on the E coast of Italy, 161 m by rail S E of Rome, and 1354 (rail, &c.) from London, largest town of Italy, depth along the quays varies from 19 to over 60 ft, and the harbour has been, and is being, improved, so

that the largest vessels can load and discharge alongside the quays. The trade is very large, the exports having an annual value of nearly £2,500,000, and the imports an average value of some £5,000,000. About a quarter of the trade is with Great Britain, about a fifth with the United States, and a little less than a tenth with France. Chief imports grain, metals, earthenware and glass, cotton and woollen yarn and cloth, machinery, coal, leather and leather goods, silk, hemp, flax, chemicals, tobacco, timber, and provisions. Chief exports animals and animal products, cereals, hemp and flax manufactures, wine, olive-oil, cottons, leather and gloves, chemicals, perfumery, paper and books, silks, woollens, artificial flowers, coral, flowers, &c. Manufacture of macaroni, soap, and patent fuel. Time for noon at Greenwich, 12 57 P M. Letters, 2 days 3 hours, parcels, 4 days. Regular communication from London, Liverpool, Southampton, and Hull. Distance from London by sea, 2280 m, Liverpool, 2180, Glasgow, 2300, Cardiff, 2100; Gibraltar, 950, Marseilles, 450; Genoa, 340. British consul. Area of province, 350. Pop 1,136,000, pop of town, 564,000

Narayanganj, a town of Bengal, India, 10 m S S E of Dacca; jute centre. Pop 24,500

Narbonne, a town of the department of Aude, France, 93 m by rail E S E of Toulouse, and connected by the Canal du Midi with the Mediterranean at La Nouvelle, 13 m distant; famous for strong red wine, and with trade in salt, sulphur, and a celebrated white heather honey. Pop 29,000

Nariad, a town of Bombay, India, 30 m. N N E of Cambay, with a large trade in tobacco and ghee. Pop. 31,500.

Narragansett Bay, a bay on the S E of Rhode Island, United States, 28 m long by from 3 to 12 broad.

Narva, a port of Russia, on the Narova River about 9 m up from the Gulf of Finland, and 101 m by rail W S W of St. Petersburg. The falls on the river, 18 ft high, afford water-power for driving paper, cotton, woollen, and linen, mills, &c. Depth on the bar about 14 ft., in the outer harbour, 20 to 30 ft., at town, 10 ft. Imports (total value £650,000—five-sixths from United Kingdom), cotton (raw—five-sixths), jute, herring, coal, pig-iron, &c., exports (total value over £80,000—about half to United Kingdom), deals and battens, pit-props, and flax and hemp, &c. Of about 100,000 tons, entered and cleared, about 40 per cent are British. Distance from London, 1340 m; Leth, 1240; Hull, 1245. British vice-consul. Pop 35,000

Nashua, a town of New Hampshire, United States, at the junction of the Merrimac and Nashua rivers, 40 m by rail N W of Boston, with iron works, and manufactures of carpets, paper, sheeting, and shirting, large amount of water-power obtained from the falls on the Nashua River. Pop 24,000

**Nashville**, the chief town of Tennessee, United States, on the Cumberland River 200 m. up from the Ohio, and 185 m. by rail S S W of Louisville, great railway and commercial centre, with extensive trade in cotton and tobacco, and manufactures of cotton, flour, oil, paper, wooden goods, leather, &c. Pop 81,000

**Nasik**, a town of Bombay, India, on the right bank of the Godavery River, 100 m. by rail N E of Bombay with manufactures of brass and copper work, paper, and cotton. The district of the same name has an area of 5940 m. Pop 846,000, pop of town, 21,500

**Nassau** See Hesse Nassau

**Nassau**, the chief town and port of the Bahamas, with a harbour taking vessels up to 15 ft. at high water of spring tides. Pop 8000

**Natal**, a British colony of South Africa, lying between 27° 20' and 31° 10' S, and between 29° and 32° E. It is bounded N E by Transvaal Colony and Zululand, S E by the Indian Ocean, S W by Cape Colony and Basutoland, and N W by the Orange River Colony, has an extreme length from N to S of about 260 m, an extreme width of about 190 m, and an area of about 28,000 m. There is a seaboard of over 160 m, but except at Durban and Umhlatuzi (see Zululand) it is unbroken and useless for trading purposes. The surface is everywhere hilly, rising by a series of step-like terraces to the interior at the portion of the Drakensberg known as the Quathlamba or Kwathlamba Mountains. The drainage is carried off by a number of rivers, not navigable, and only here and there of importance for irrigation. The most important are the Buffalo and the Tugela rivers in the N E, the Umkomanzi, the Umzimkulu, and the Um-tamruna. The climate varies with the altitude, but is fine and healthy, and there is an average rainfall of some 42 in. Among the mountains, and in several of the coast districts, there are considerable tracts of forest with well grown timber, while the upper terraces afford excellent pasture on which large numbers of cattle, goats, sheep, and horses are reared, and on the lower there are good crops of wheat and maize. On the high plateau there are also some ostriches kept. The coast strip from 30 to 40 m wide has very fertile soil, and yields a considerable amount of sugar and tea, as well as arrow-root palms, coffee, tobacco, ginger, bananas, grapes, and other tropical and subtropical fruits. There are rich coal and iron fields in the N. W. about Dundee and Newcastle, and deposits of shale abounding in paraffin and sulphate of ammonia. Copper is also found in the N, and near Port Shepstone in the S are marble and limestone quarries and manufacture of lime and cement. Other industries are sugar-making, waggon-making, saw mills, the making of preserves, bone-crushing, distilling, tanning,

wine-making, &c. The total imports are valued at some £7,000,000, the chief articles being apparel and slops, provisions of all kinds, agricultural implements, hardware and machinery, rice, dairy produce, leather and leather manufactures, furniture, tobacco, cottons and woollens, soap and candles, drugs and chemicals, stationery, electrical fittings, &c. Of the whole, over 60 per cent come from the mother country, the leading articles being apparel and haberdashery, iron, leather, cottons, woollens, and linens, railway plant and machinery, furniture, hardware and cutlery, chemicals, soap, paper, &c. About 14 per cent come from other parts of the British Empire. The total exports are valued at about £3,000,000, the chief articles being wool, coal, sugar and molasses, hides and skins, wattle bark, angora hair, and gold. Of the whole about 23 per cent come to the mother country, the leading commodities being wool, hides, coffee, bark, and skins. Tonnage entered and cleared (largely British) about 1,600,000 tons. There are over 600 m of railway almost entirely government property. The government is carried on by a Governor appointed by the Crown, a Legislative Council, and a Legislative Assembly. Mails from and to London every week, letters, 1d, postcards, 1d, parcels, not over 1 lb 9d, and 9d for each additional pound or fraction of a pound up to 11 lbs, money orders to and from, telegrams, 3s a word, letters, 21 days, parcels, 27. Pop, exclusive of Zululand and Amatongaland, estimated at some 680,000, of whom about 60,000 are Europeans, and 70,000 are Asiatics introduced to work the sugar and other plantations of the hot coast strip.

**Natal**, a town on the E coast of Brazil, 160 m N of Pernambuco, bar has a depth of 15 ft. at high water of ordinary springs, and 14 ft at ordinary neaps, imports machinery for making sugar, cotton prints, jute-bagging, and general goods, exports sugar in bags and cotton. British vice-consul. Pop 12,000

**Natchez**, a town of Mississippi, United States, on the left bank of the Mississippi River, 214 m by rail and 300 by river N N W of New Orleans, large export of cotton, and busy general river trade. Pop 12,500

**Naumburg**, a town of the province of Saxony, Prussia, on the Saale, 30 m by rail S W of Leipzig, with ivory carving and manufactures of combs, woollens, hosiery, &c. Pop 23,500

**Navan**, a town of Meath, Ireland, at the junction of the Boyne and Blackwater, 16 m by rail W of Drogheda, with woollen manufactures. Rich agricultural district. Pop 3839

**Navarre**, a province of N E Spain, between the western Pyrenees and the Ebro. The northern half is a mountainous pasture country, but the southern half, where irrigation is used, produces heavy crops of grain, grapes, olives,

and fruits Iron ore is worked (but only to a very small extent on account of the difficulties of transport) and there are mines of silver-lead and copper Salt is also found Area, 6046 m. Pop 303,000

**Nawabganj**, a town of Oudh, India, 16 m E N E. of Lucknow, with trade in sugar and cotton. Pop. 16,000

**Neagh, Lough**, a large lake (the largest in the British Isles) in the province of Ulster, Ireland, at the meeting place of the counties of Londonderry, Tyrone, Armagh, Down, and Antrim In shape an irregular parallelogram, it has a length of about 16 m, a breadth of 10, and an area of 98,300 acres The surface level is 48 ft above the sea, and the depth nowhere much exceeds 100 ft The principal rivers received are the Bann and the Blackwater, and the Lower Bann is sent off northward to the sea near the entrance to Lough Foyle There is communication by canal with Belfast, Newry, and the coal region of Tyrone

**Neath**, a river port of Glamorganshire, South Wales, near the mouth of the river Neath, 8 m by rail E N E. of Swansea, centre of coal and iron district, depth on bar 28 ft at high water of spring tides, but only 2 to 3 ft at low water, dock entrance 25 ft at high water of spring tides, 16 ft at neap tides, imports copper, iron, and zinc, ores; timber, wool, and provisions; exports coal, copper, firebricks, spelter, &c, copper, tinplate, engineering, chemical, and iron-founding, works. Pop 13,732

**Nebraska**, a north centre state of the United States, extending westward from the Missouri towards the Rocky Mountains There is a barren strip in the N and N W, but elsewhere the soil is good prairie, with here and there fertile "bottom" lands The surface slopes from about 1200 ft above sea-level in the E by gentle undulations to some 6000 ft in the W Agriculture and stock-rearing important, the first especially by irrigation in N and W.; excellent crops of wheat, maize, oats, alfalfa grass, fruit, and sugar-beet, dairying, goats, poultry, eggs; cattle, and a great number of pigs, the former mostly in the W, the latter in the E Area, 76,840 m Pop 1,066,500

**Neckar**, a river of South Germany, rising in the Black Forest in Wurtemberg, with a northerly and north-westerly course of about 250 m to the Rhine at Mannheim. An exceedingly fertile valley with vines and southern fruit Navigable for 117 m It is proposed to canalise it to Esslingen in Wurtemberg at a

with imports of coal, gunny-bags, and piece-goods, and exports of piece-goods and ghee, the total value of trade being over £800,000 Distance from Madras by sea, 150 m, Colombo, 500 Pop 57,500

**Negro, Rio**, a large river a little to the S of the middle of the Argentine Republic, with a course of 650 m, of which over 400 are navigable Steamers take a little over 4 days to reach the highest point, but can descend in about half that time

**Negro, Rio**, a river rising in Colombia, and flowing eastward and north-eastward through Brazil; the largest tributary received by the Amazon (which it joins a short distance below Manaus) from the N, with a depth along the lower part of its course in the high-water season (April to August) of over 100 ft, navigation interrupted by rapids, but extends upwards for about 450 m Total length probably about 1300 m Area of basin probably about 275,000 m

**Neilgherry, or Nilgiri Hills**, a hilly district in the S. of India, at the meeting point of the Eastern and Western Ghats, with an extreme height of 8760 ft Dense forests occupy the lower part of the hills, and the upper part is grassy upland with belts of forest. Cattle rearing

**Neilston**, a town of Renfrewshire, Scotland, 10 m. by rail S W. of Glasgow, with cotton spinning and bleaching, and print-works Pop. 2668

**Neisse**, a town of Silesia, Prussia, on the Neisse, a tributary of the Oder, 50 m by rail S E of Breslau; railway centre, with considerable trade in wool, and manufactures of machinery, chemicals, and linen Pop 24,500

**Nelson**, a town of Lancashire, England, 3½ m by rail N N E of Burnley; centre of coal district with manufactures of cottons, woollens, silk, and machinery. Pop 32,816

**Nelson**, a province in the N. end of the S. Island of New Zealand, with an extreme length of about 160 m, a breadth of 100 m, a coast line of about 250 m, and an area of 6,512,100 acres The surface is mountainous, rising to an extreme height of about 8000 ft Rich in coal and gold, the valuable and extensive pits about Westport and Greymouth in the S W. supplying quantities of coal suitable for the furnaces of steamers and the manufacture of gas as well as for household use. There are also large deposits of iron ore, limestone, chrome, lead, copper, and asbestos There are about 64 m of railway. The chief town, of

Pop. of province (exclusive of Maoris), 38,000 ,  
pop of town, 7000

Nelson, a river of Canada, flowing from Lake Winnipeg N E to Hudson Bay, with a course of about 350 m, of which the last 90 m, from Port Nelson at the mouth upwards, are navigable, and proposals have been made to canalise the whole stream, and so to provide an outlet for the grain and other products of Manitoba *via* Hudson Bay

Nen, or Nene, a river flowing into the Wash, E coast of England, navigable for small vessels, and communicating by canals with the Ouse and the midland districts of the country

Nepal, a small independent state of India, on the S side of the Himalayas, with a length of 512 m, a breadth of from 70 to 150, and an area of some 54,000 The surface rises from 3000 to 16,000 ft, and is drained by tributaries of the Ganges A great portion of the country is covered with forests, and copper, iron, sulphur, jasper, &c are said to be abundant Imports general goods, both European and Indian, exports grain, oil-seeds, and timber Pop estimated at from 2 to 5 millions

Nerbudda, a river of India flowing W to the Gulf of Cambay, with the Vindhya Hills on the N and the Satpura Range on the S Total length 800 m, of which only some 30 m are navigable Area of basin about 37,000 m

Netherlands, The, or Holland — *Surface and Size* — Holland is a kingdom of western Europe, in the N W corner of the great European plain, lying between 50° 45' and 53° 36' N and between 3° 22' and 7° 15' E, and bounded E by Germany, S by Belgium, and W and N by the North Sea The greatest length is nearly 200 m, the greatest breadth about 110 m, and the area, which varies somewhat from time to time, owing to the encroachments of the sea, or the reclamation of land, may be put in round numbers at 12,600 m The N E is broken by the great inlet of the Zuider Zee, the N W by the smaller openings of the Dollart and the Lauwer Zee, and the S W by the many mouths of the Rhine, Meuse, and Scheldt, while the part of the coast between the Helder and the Hook of Holland is practically without inlet The openings, however, are not of very great value as the bulk of them are shallow and winding, and approach has to be made to the ports by canals or carefully prepared channels (*see* Rotterdam, Amsterdam, Helder, &c) The surface is everywhere flat and low (highest point in S E about 650 ft), the whole country in fact consisting of the delta formed by the Rhine, Meuse, and Scheldt. In many parts, indeed, the land is actually below the level of the sea, from which, and from the river branches, it has been reclaimed, and cattle may be pastured in meadows which are 10 to 25 ft below the surface of the waterways along their borders All these tracts are defended from

overflow by great embankments or "dikes" with broad flat tops, along which go the roads and footpaths. There is thus, of necessity, a large amount of damp marshy land, but the accumulation of moisture is prevented by the surplus water being run off at ebb tide, or pumped up to higher levels, and thence sent off to the sea The result is a large amount of excellent pasture, the grasses being both heavy and succulent The pumps are largely worked by windmills, for the action of which the flatness of the country gives every opportunity. The drainage passes directly to the sea, or is carried off by the network of branches from the rivers already mentioned, and these have, in many cases, names of their own—Yssel, Old Rhine, Lek, Waal, Merwede, the North, the Old, and New, Maas (Meuse), &c. All these form many islands in the S W, and there is also a chain of low islands along the N. The climate is much the same as that of England, the average rainfall being about 28 in., and the range of temperature between 34° and 66° Fahr

*Government* — The government is a constitutional monarchy with the legislative power vesting in the sovereign and the States General, the latter with a First Chamber of 50 members and a Second Chamber of 100 members The pop numbers about 5,180,000, of whom considerably over one-third are in the towns of over 20,000 inhabitants In the country there is a very large proportion of small proprietors (less than 50 acres) of whom more than half work their own land The country has valuable colonial possessions including Java, Sumatra, and other islands in the Eastern Archipelago, Dutch Guiana, and Curaçao

*Communications* — The railways have a total length of some 1800 m, of which more than half belongs to the state, but the great means of communication are the canals and navigable rivers, of which Holland possesses a network practically unique when its size is considered The navigable rivers and the canal system have each a length of about 3000 m, penetrating to every part of the country, and providing steady irrigation and waterway communication for trade; while in winter the canals, when frozen, enable communication to be made from place to place by skaters Some of the chief canals are separately noticed, the whole system being very important in view of the enormous transit trade passing through Rotterdam and Amsterdam Probably some 18,000,000 tons of goods pass over the main lines alone

*Resources and Productions* — Holland is mainly a pastoral and trading country Of the whole productive area about one-third is under pasture, with large numbers of cattle and horses, and smaller numbers of sheep, pigs, and goats About one-quarter is under cultivation, the chief crops being rye, potatoes, oats, wheat, buckwheat, barley, beans, peas, beetroot, flax,

tobacco, madder, rape-seed, and colza The large number of small properties worked by their owners—especially in North Brabant, Guelders, Limburg, and Overijssel—has been already alluded to The 140,000 acres under market-gardens and orchards are of considerable importance, as the country has long been famous for bulbs and flowers (Haarlem and Noordwyk), and the annual value of the bulbs, shrubs, and trees exported, is about £700,000, while the vegetable export is valued at £4,000,000 There is also in the central provinces production of cherries, apples, pears, and strawberries The country takes an important share in the North Sea fisheries (herring particularly), and has a large trade of its own in oysters, in salmon and eels from the rivers, and in herring, anchovies, shrimps, and eels The only mineral is coal mined in small quantities (annual output under £60,000) in the S E The leading industries are ship-building, distilling of spirits (gin, &c.), making of hydraulic and other machinery, mill-work, and diamond-cutting, those of less importance the manufacture of margarine, paper, earthenware, vinegar, salt, sugar, cocoa, cigars and tobacco, carpets and other woollens, cottons, linens, &c

*Trade*—Holland has an important trade with its colonies, a large general carrying trade, and a valuable transit trade to Germany and central Europe directly and through Belgium, and also through Belgium to France The total value of imports for home consumption is estimated at about £165,000,000, and of the exports of home produce at about £140,000,000, while the transit trade is valued at nearly £500,000,000 Of the first, over 18 per cent come from Germany, over 14 from Great Britain, over 14 from the United States, and over 13 from the Dutch East Indies, while of the second over 50 per cent go to Germany, 22 to Great Britain, and nearly 4 each to the United States and the Dutch East Indies. The proportion for other countries can hardly be estimated with any degree of accuracy, owing to difficulties in discriminating the real places of origin or destination, and even for Germany and Great Britain the figures given include products coming from or going to other countries Of the transit trade the most important lines are bread stuffs, iron and steel, and textiles (between £28,000,000 and £10,000,000); copper, coal, wood, coffee, and rice (all between £7,500,000 and £4,000,000), and saltpetre, oil-seeds (colza, linseed, &c.), skins, tin, grease (including tallow and fat), margarine, sugar, painters' colours, gold and silver, mineral oil, and zinc (all between

calcs, and hardware (all between £500,000 and £100,000) The total trade, entered and cleared, is over 19,000,000 tons, of which over 73 per cent are Dutch, and the mercantile marine has a tonnage of some 382,000 There are British consuls at Amsterdam and Rotterdam, and a number of vice-consuls Letter postage from the United Kingdom, 2½d per half-oz, postcards, 1d; parcels, not over 3 lbs, 1s, between 3 and 7, 1s 6d between 7 and 11, 2s, money orders to and from, telegrams, 2d a word; mails to and from London twice daily

*Money, &c*—The unit of account is the gulden or guilder=1s 8d, and there is a rijksdaaler=2½ guilders, and a gold 10 guilder piece. The guilder=100 cents The weights and measures are according to the metric system (hektare, hektoliter) The Dutch flag has three horizontal bars, red, white, and blue, the red above

**Neuchâtel**, a canton of N W Switzerland, lying along the French border by the Jura Mountains, which here reach a height of about 4900 ft., drained by tributaries of the Rhine, and by streams flowing to Lake Neuchâtel, which sends off its surplus to Lake Bienne and so to the Aar, coal, iron, and asphalt (Val de Travers), watchmaking, asphalt-working, making of lace, wine, and absinthe The lake, 25 m long, and from 3 to 6 wide, is 1420 ft above sea-level, and has a depth of 472 ft Neuchâtel, the chief town, is on the N W side of the lake, 85 m by rail N N E of Geneva, with manufactures of watches, jewellery, &c Parcels, 1 day 14 hours Area of canton, 312 m Pop 126,500, pop of town, 21,000

**Neufchâtel**, a little town of Normandy, France (Seine-Inférieure), 25 m by rail S E of Dieppe, famous for the manufacture of cream cheese Pop 4500

**Neumunster**, a town of Schleswig-Holstein, Prussia, on the Schwale, 20 m by rail S S W of Kiel, with woollen weaving and dye-works Pop 27,500

**Neunkirchen**, a town of the Rhine province of Prussia, 13 m by rail N W of Saarbrück, coal centre, with large iron works Pop 28,000

**Neu Ruppın**, a town of Brandenburg, Prussia, 32 m N N W of Spandau, with manufacture of woollen yarn and cloth; iron foundries, and machinery. Pop 17,500

**Neuss**, a town of the Rhine province of Prussia, on the left bank of the Rhine, 4 m by rail W of Düsseldorf, with manufactures of iron ware (agricultural implements, &c), cotton and woollen cloth, leather, and

**Neustadt an der Haardt**, a town of Bavaria, in Germany, 17 m W S.W. of Mannheim, with manufactures of paper and cloth. Pop 18,000.

**Neustadt in Oberschlesien**, a town of Silesia, Prussia, 25 m S W of Oppeln, with manufactures of carpets and other woollen fabrics, and of damasks and other linens. Pop 20,500

**Neuwied**, a town of the Rhine province of Prussia, on the right bank of the Rhine, 8 m N W. of Coblenz, with iron and zinc works, and small manufactures of iron and tin ware. Pop 11,000

**Neva**, a river of W Russia, carrying off the surplus waters from Ladoga, and the other great lakes connected with it, to the Gulf of Finland. Although it has a length of only about 40 m, it has an average width of between 500 and 600 yards and a depth of some 60 ft. It is frozen from about the last week of November to near the end of April. By the canals connected with the great lakes communication may be obtained to the Volga, and vessels may thus pass from the Baltic to the Caspian and *vice versa*

**Nevada**, one of the south-western states of the United States, in the great Cordilleran plateau between the Rocky Mountains and the Sierra Nevada. The surface is a plateau some 5000 ft. above sea-level, crossed by various parallel mountain ranges, the only point where the surface is lower being in the extreme S, where it drops abruptly to about 600 ft along the Colorado River. The northern part of the state is known as the Great Basin, and seems to have been at one time occupied by a great inland sea. The rainfall is very slight, being on an average about 5 m., and the soil in consequence very barren, nor can irrigation be carried on to any great extent from lack of rivers from which to draw water. The extreme southern boundary is formed for about 150 m. by the Colorado, and the Humboldt River flows across over 300 m of the Great Basin, but this and other smaller streams end in salt lakes known as "sinks," the waters being impregnated with salts of sodium, potassium, and borax. The state is, however, rich in minerals, its production of silver and gold having been from 1859 to 1891 enormous. The output, although now smaller, is still very large, and there are also deposits of lead, sulphur, antimony, nickel, and cobalt. Area, 109,740 m. Pop. 42,500

**Nevers**, the chief town of the department of Nièvre, centre France, at the junction of the Nièvre and Loire, 160 m by rail S S E of Paris, with large iron-foundries and manufactures of cables and chains, agricultural implements, and china and earthenware. Pop 28,000

**Neviansk**, a town of Perm, Russia, 50 m by rail N N E of Ekaterinburg, with rich deposits of gold and iron. Pop 18,000

**Nevis**, one of the British West Indies, in the Leeward Islands, about 2 m S of St. Christopher, nearly circular in form, with an area of about 50 m., of which half is fit for cultivation. Centre rises in an extinct volcano, 3200 ft. Sugar, rum, limes, and oranges, the latter two only to a small extent. Regular communication from London. Mails to and from every fortnight, letters, 1d. per half-oz.; postcards, 1d.; money orders to and from, parcels, under 3 lbs, 1s; between 3 and 7, 2s; between 7 and 11, 3s.; letters, 15½ days. Pop 13,000

**New Albany**, a town of Indiana, United States, on the right bank of the Ohio River, 317 m by rail S.E. of Chicago. A fall on the Ohio close to the town gives water-power, which is employed in connection with the manufactures. Glass works, cottons, woollens, iron and brass rolling mills, machinery, and bricks. Important river trade. Pop 21,000

**New Almaden**, a small town of California, United States, 57 m S S E. of San Francisco, with a large and important quicksilver mine, producing about 2 million lbs. a year

**Newark**, a town of New Jersey, United States, 9 m by rail W. of New York, important industrial, railway, and river, centre, with manufactures of leather, saddlery, boots and shoes, brass and iron work, machinery, carriages, hats, clothing, and thread. Pop 246,000

**Newark**, a town of Ohio, United States, 33 m. by rail E by N. of Columbus, near large coalfield, and with manufactures of boilers, machinery, stoves and other iron ware, waggons, glass ware, and woollens. Pop 18,500

**Newark-on-Trent**, a town of Nottinghamshire, England, on the navigable Trent, 18 m. by rail N E. of Nottingham, important agricultural centre, with manufactures of boilers and agricultural implements, gypsum works, iron and brass foundries, breweries, and flour mills. Pop. 14,985

**New Bedford**, a port of Massachusetts, United States, near the mouth of the Acushnet River, 56 m by rail S. of Boston. Harbour at the mouth of the river can be entered by vessels of 18 ft. draught. The whale fishing, for which the place was once so famous, has now declined to a very great extent, but there are very large cotton mills, oil refineries, foundries, glass works, flour mills, boot and shoe works, &c. Imports coal, lumber, hemp, and general merchandise; exports oil, whalebone, cotton goods, ropes, &c. Pop 62,500

**New Britain**, a town of Connecticut, United States, 9 m by rail S W of Hartford, with manufactures of hardware, cutlery, locks, hooks and eyes, hosiery, &c. Pop 26,000

**New Brunswick**, one of the maritime provinces of the Dominion of Canada, lying to the W of the Gulf of St. Lawrence and bounded N and N W by Chaleur Bay and the province of Quebec, W by Quebec, and Maine; S. by

the Bay of Fundy, and E by the Gulf of St. Lawrence. It is roughly quadrangular in shape, with a length from N. to S. of about 220 m, and a width from E to W. of about 155. The surface undulates from the coast to heights of about 3000 ft. The coast-line has an extent of about 600 m, along which are innumerable bays, harbours, and inlets, and there is a perfect network of internal waterways, rivers, streams, and lakes, the drainage being carried off by the St. John River (which has a course of over 400 m along the western portion of the province and through the south centre), the Miramichi, Restigouche, and other smaller streams. The rainfall is about 10 in. per annum, and the climate is very much like that of Great Britain, except that the summers are probably a little warmer, though by no means disagreeably hot. The centre and northern parts of the province are thickly wooded, over 10 million acres being covered with trees of value for lumber and wood-pulp. The soil falls under three divisions (1) upland, which is of good quality, (2) the alluvial land along river valleys known as "intervale," which is rendered very fertile by being flooded twice every year (spring and autumn), good crops being in consequence grown with a smaller quantity of manure than would otherwise be possible, (3) the low flat extending to about 100 m along the coast of the Bay of Fundy, which is known as "dyke-land," and which requires no manure at all, but is fertilised by having the waters of the Bay of Fundy turned in upon it about once in every ten years. This is sufficient to render it very productive, the hay crop reaching a maximum occasionally of 4 tons an acre. The province is rapidly developing a trade in agricultural produce, particularly cheese and butter, and, as the distance from Great Britain is only 2300 m, and there is regular and frequent communication between St. John, the chief town, at the mouth of St. John River, and the United Kingdom, by regular lines of steamers, most of them fitted with cold storage, there ought to be an excellent European market. Cheap coal and cheap water-power have also given rise to a number of manufactures, of which may be mentioned cotton spinning and weaving, wool spinning and weaving, and the manufacture of wood pulp for paper-making. The fisheries are valued at nearly £1,000,000 a year, and the lumber trade is also extensive and important. Area, 27,911 m. Pop 331,500.

**New Brunswick**, a town of New Jersey, United States, at the head of navigation on the Raritan River, and at the end of the canal connecting the Raritan with the Delaware, 31 m by rail S W of New York, manufactures india-rubber goods, iron and brass ware, hosiery, and paper-hangings. Pop 20,000.

**Newburg**, a town of New York, on the W bank of the Hudson, 58 m. by rail N. of New

York, with shipyards, boiler works, foundries, manufactures of carpets and other woollen goods, cottons, leather, and oil-cloth, trade in coal, grain, flour, and butter. Pop 25,000.

**Newburyport**, a port of Massachusetts, on the S bank of the Merrimack 3 m up, and 37 m by rail N E. of Boston, harbour with 17 ft on bar at high water of ordinary spring tides; manufactures boots and shoes, cottons, combs, hats, &c. Pop 14,500.

**New Caledonia**, an island belonging to France, in the South Pacific, about midway between Queensland and the Fiji Islands. The length is about 240 m, and the average width about 25. A narrow central plateau, slightly nearer the E than the W. coast, runs along the island from end to end, reaching the extreme height of about 5400 ft. The tropical heat of the climate is modified by sea breezes, and has an average of over 66° Fahr. in the cool season, from April to September, and of about 88° in the warm season, between October and March. The rainfall is between 50 and 65 in, the rainy season on the S W coast being generally between April and July, and on the N E coast between January and April. The island is well watered, and the soil fertile yielding heavy crops of the usual tropical productions, the most important being cotton and vanilla. The forests produce caoutchouc, gums, ebony and other hard woods, and cajuput, and probably many localities will be found suitable for the cultivation of wheat, rubber, and vines, and for the rearing of silkworms. The island abounds in minerals, nickel is very important, chrome and cobalt less so, and copper and silver-lead are mined, while iron and manganese are found. Of the imports (total value over £500,000) more than 55 per cent are from France and French colonies; of the exports (total value nearly £500,000) rather less than half go to France and French colonies. The chief imports are coal, hardware, linen and clothing, provisions, and general goods, and the exports are very largely minerals (nickel, chrome, cobalt, &c.), and a little copra is also sent away. Of over 200,000 tons, entered and cleared, about one-third is British. The chief town and port is Noumea. Mails from and to London every week, letters, 2½d per half-oz., postcards, 1d., parcels under 3 lbs, 4s., between 3 and 7, 4s 6d., between 7 and 11, 5s., telegrams, *via* Turkey, 3s 6d a word, other routes, 3s 8d. Regular communication from London. Distance from Sydney, 1070 m. British consul. Area, including the smaller dependent islands, 6450 m. Pop 54,000, of whom rather over 19,000 are Europeans, 7500 convicts undergoing sentence (the island being a French penal settlement), and 2500 liberated convicts.

**Newcastle**, a port of New South Wales, 102 m. by rail N. of Sydney, on the S bank

of the Hunter River at its mouth, entrance to the harbour somewhat dangerous, depth on bar 21 ft, and with spring rises of 5 ft. vessels of over that draught can enter with safety, 23 ft. at quays, 27 to 30 ft in middle of the harbour, great centre of the coal trade and point of export of all the Hunter River district productions, coal, wool, and frozen meat are exported in enormous quantities, exclusive of coasters there is a total trade, entered and cleared, of over 2 million tons; shipbuilding, manufacture of boots and shoes, copper works, carriage factories, foundries, smelting and engineering works. The total value of the exports is now over £2,000,000, while the imports (mostly general goods) have a value of about £700,000. Regular communication from Liverpool. Pop 14,500

Newcastle, a town of Pennsylvania, United States, 50 m by rail N N W of Pittsburg, coal centre with steel works, rolling-mills, and making of wire nails, tin-plate, and flour Pop 28,500

Newcastle-on-Tyne, a city of Northumberland, England, on the north bank of the Tyne 10 m. up, 275 m by rail N by W of London, and 117 S E. of Edinburgh, with important shipbuilding, making of locomotives and other engines, machinery, cannon, white and red lead, alkali and other chemicals, artificial manures, lead and lead pipes, glass, earthenware, fireclay, painters' colours, wire-rope, nails, sailcloth, &c. The famous works of Armstrong, Whitworth, & Co, Limited, comprise within themselves furnaces, foundries, steel-works, machinery manufacture, cannon manufacture, and everything necessary to build and equip a man-of-war, so that she can be sent out ready for action in every respect except that ammunition is lacking. The manufacture of locomotive engines was begun by George Stephenson. From Newcastle and the other Tyne ports there is a large export of coal. Docks are numerous and have depths on sill up to 32 ft. at high water of spring tides, while in the newer basins vessels of 20 ft. can enter the outer lock at low water. There are dry docks connected with the shipbuilding yards up to 600 ft. The imports and exports of Newcastle cannot be conveniently given apart from those of North and South Shields, but, taking the Tyne ports collectively, the imports have an average value of over £9,000,000, the principal articles being butter (over £3,000,000), wheat, oats, maize, flour, &c (over £1,200,000), meat (over £400,000), iron ore and iron manufactures, and lead (ore, pig, and sheet)—both over £500,000—copper, timber of all kinds (about £300,000), eggs (£300,000), glass, silver ore, petroleum, refined sugar, fish, oranges and other fruits, machinery and metal work, iron and copper pyrites, paper (including straw-board) and paper-making materials, and raw

vegetables. The exports of British and Irish produce are valued at over £10,000,000 the principal being coal (nearly £6,000,000), new ships and boats (nearly £1,000,000), iron and iron and steel manufactures, copper wrought and unwrought—each about £400,000—arms and military stores, steam engines and other kinds of machinery, painters' colours and materials, bricks, chemicals and chemical preparations, manure, and lead (pig and manufactured). Distance by sea from Leith, 115 m., London, 365. Pop. 214,803

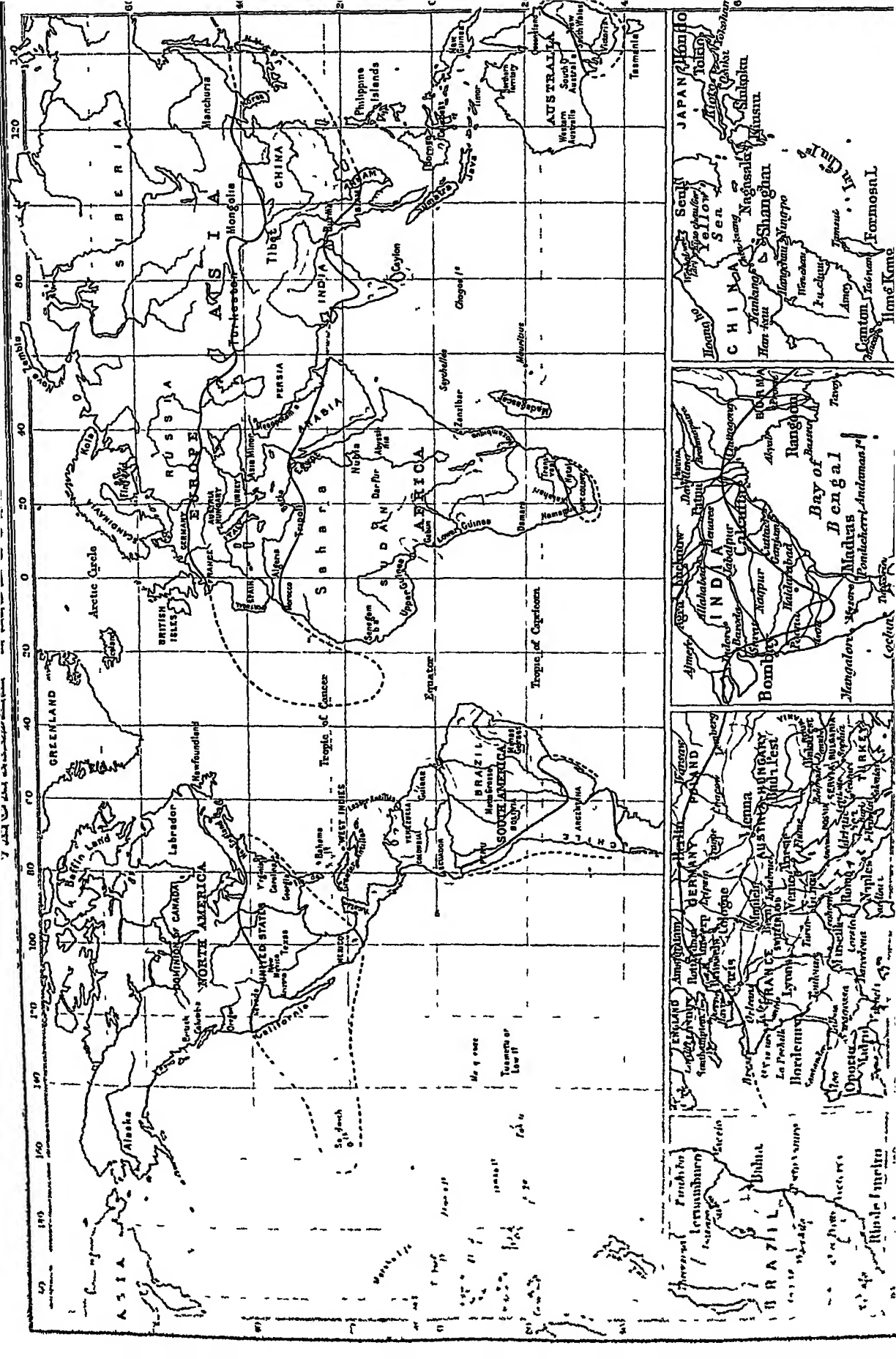
Newcastle-under-Lyme, a town of Staffordshire, England, 16 m by rail N N W. of Stafford, and with water communication with Stoke by the Great Junction Canal, centre of coal mines and potteries; manufacture of paper, and large factory for the making of clothing for the Army. Pop 19,914.

Newchwang, a port of the province of Sheng-king, Manchuria, China, the most northerly of the Treaty Ports, 13 m up the Liao-ho, and 118 m. W S W. of Moukden, depth on bar at high water of ordinary spring tides, 19 ft., neaps 14 ft, but, inside, the river becomes deeper, and opposite the town there is a commodious anchorage, imports (total value about £2,700,000), cotton piece-goods and Indian and Japanese cotton yarn, woollen and silk cloths, sugar, coal, flour, metals, matches, opium, tobacco, petroleum, exports (total value about £3,500,000), beans, bean-cake, bean-oil, raw silk, &c. The direct foreign export and import is almost entirely with Hong-Kong and Japan. Of a total of some 1,000,000 tons, entered and cleared, about 20 per cent are British. There is railway communication by a branch from the Eastern Chinese (Russian) Railway to Port Arthur and Dalny, but the coal-fields, which the line was intended to open up, in the Liao-tung peninsula have been found to contain so far only seams of inferior quality, and operations have not been attended with success. The river is frozen for about three months in the year, from November. Manufacture of salt. Distance from London, 11,170 m., Liverpool, 11,100; Glasgow, 11,200; Cardiff, 10,990. British consul. Pop 60,000

New England, the name given to the north-eastern states of the United States Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut

New Forest, a district of Hampshire, England, 9 m. S W. of Southampton, and lying between the Hampshire Avon, the Solent and English Channel, and Southampton Water. Triangular in form, with sides of about 15 m., it has an area of about 93,000 acres, of which over 64,000 are crown lands. The trees are mostly oaks and beeches.

Newfoundland, an island and British Colony in North America, off the mouth of the St.







and copra Many of the rivers will, by and by, give good communication with the interior Mails to and from London for German New Guinea twice a month, letters, 2½d per half-oz.; postcards, 1d; parcels, under 3 lb., 3s; between 3 and 7, 3s. 6d; between 7 and 11, 4s, money orders both ways For British New Guinea postal arrangements see Australia, and New South Wales

**New Hampshire**, one of the New England states of the United States, with some 18 m of sea coast along the Atlantic. From the coast the surface undulates to a height of almost 6300 ft in the White Mountains; drained by the Connecticut, Merrimac, Piscataqui, and other streams, which are of very considerable importance for furnishing water-power for manufacturing purposes, especially the Merrimac, which is said to drive more spinning and weaving machinery than any other river Large amount of important woodland, yielding lumber Manufactures of cottons, woollens, mixed fabrics, hosiery, leather, and boots and shoes Area, 9005 m. Pop 412,000

**Newhaven**, a port of Sussex, England, at the mouth of the Ouse, 56 m by rail S of London, with regular communication with Dieppe (64 m, 5½ hours) Depth of outer harbour 30 ft at high water, and 10 ft. at low water, of ordinary spring tides, neaps about 5 ft less Imports (total value over £10,000,000), silks, woollen and cotton manufactures, gloves, eggs, wines and spirits, chocolate and cocoa, carriages, raw coffee, fish, artificial flowers, condensed milk, butter, fancy goods, fruit, linen manufactures, margarine, metal manufactures, refined sugar, potatoes and other vegetables, cheese, china and earthenware, electrical goods, ornamental feathers, glass, and paper (including strawboard) Exports (total value over £2,000,000), woollen and worsted manufactures, silk manufactures, cotton manufactures, leather, meat and other provisions, hats, chemicals and chemical preparations, machinery and mill work, and paper, and there is an export of foreign and colonial merchandise of over £600,000, chiefly ornamental feathers, hemp, jute, furs, wool, chemical manufactures, coffee, ivory, quicksilver, and raw silk Pop 6772

**New Haven**, a port of Connecticut, United States, 73 m by rail ENE of New York, with a large coasting trade, and considerable import from and export to foreign countries, depth at entrance, 20 ft, vessels of 18 ft can reach the quays, and the harbour is now (1903) being deepened so as to admit larger vessels, good railway communication, imports rugs, paper, lumber, wood-pulp, coal, iron, rails, and general merchandise, exports hoops, staves, salt meat, machinery, and rubber goods, manufactures hardware, locks, cutlery, clocks,

india-rubber goods, carriages, paper, corsets, &c Pop 104,000

**New Hebrides**, a group of about 30 islands (meanwhile under the joint control of Britain and France), in the Western Pacific, W. of Fiji, extending along a line about 600 m. in length from N.W. to S.E. The larger islands range from 70 m long by 40 wide to about a third of that size, and are mountainous, the higher points reaching over 3000 ft. The hill slopes are well wooded Climate healthy, though damp except in the N.W., and the heat tempered by sea breezes; wettest season from November to April. Sugar-cane, arrowroot, cocoa-nuts, bananas, and other tropical products; and off the coast are coral, pearl, trepang, and tortoise fisheries Mails as for Australia; parcels, 1 lb, 1s. 1d; and 7d more for each lb, or fraction of a lb, up to 11 lbs Total area about 5100 m Pop about 80,000

**New Jersey**, one of the north eastern states of the United States, with a coast line of about 120 m along the Atlantic. The surface undulates from the coast northward to outcrops of the Appalachian system, with an extreme height of about 1800 ft, drained by the Passaic, Raritan, and other smaller streams Iron ore, limestone, zinc, and slate; manufactures of sugar, silk, leather, machinery, and glass, and preserving and packing of meat; dairy produce, fruit, vegetables, &c, for the Philadelphia and New York markets. Area, 7155 m Pop. 1,884,000

**New London**, a river port of Connecticut, United States, on the right bank of the Thames 3 m up from Long Island Sound, 51 m by rail E of New Haven, and 126 N.E. by N. of New York, manufactures woollens, agricultural machinery, hardware, and silk thread, canning of fruit, and fisheries, harbour 3 m. long and 30 ft deep Pop 18,000

**New Mexico**, a territory in the S.W. of the United States, on the Mexican border, along which it has a boundary of about 180 m The surface rises from about 3000 ft. in the S.E. to over 6000 ft in the N, the centre being traversed by the main Cordilleran range, peaks of which reach a height of over 13,000 ft, drainage carried off by the Rio Grande del Norte and its tributaries The north-western part of the state is traversed by the Atlantic-Pacific Railway, and the S.W. corner by the Southern Pacific Railway Forests on the hills and in the N.W., while in the lower part there are large tracts of ground fitted for grazing, so that stock-rearing is of moment Important deposits of copper and iron in the N, where there are also valuable turquoise mines, coal, gold, silver, lead, and zinc Area, 122,460 m Pop 195,500

**New Orleans**, a town of Louisiana, United States, on both sides of the Mississippi, but mostly on the left bank, 170 m up from the

mouth of the river is high 10 m from 600 to 1000 yards in width and has a depth of from 61 to 220 ft. By the South Pass vessels up to 30 ft. can now reach the harbour, and the South-West Pass, which is wider, is being deepened to 25 ft., only one tide in the 24 hours, and it has an average rise and fall of but 18 in., port-of-call dock for ships of war, available (under conditions) for merchant vessels; takes ships of any size. Railway and canal centre. Great cotton market and with an immense trade up the Mississippi, cotton export about 200,000 bales (1000 million lbs.) valued at some £17,000,000, of which over one-third goes to Great Britain, about one-eighth to each of France and Germany, over one-eighth to Italy, and one-twelfth to Spain. Imports cane-sugar, lemons, crude india-rubber, coffee, beet-sugar (raw and clarified), fiscal hemp (packed on to Chicago for distribution), bananas, cottons, and grain bras. From Britain it gets fire-bricks, fuller's earth, brushes (hair and tooth), spirits, ale, and beer, from India, burlaps (grain bags); and from France cloths and sauternes. Exports cotton, cotton products, flour, rice, wheat, oats, pork, timber, lumber, copper, molasses, tobacco, &c. Manufactures sugar—most important sugar-refining city in the United States after New York and Philadelphia, raw sugar mostly from Cuba but some beet-sugar from Germany—tin ware, sugar and other machinery, cotton goods, cotton-seed oil, clothing, boots and shoes, saddlery, manures, furniture, &c. The foreign imports are valued at over £1,600,000; the total imports, including receipts from the interior and the coasting trade, at over £70,000,000, the foreign exports at nearly £30,000,000, and the total exports, including articles sent inland and the coasting trade, at some £69,000,000. Of over 4,500,000 tons, entered and cleared, over 2,000,000 are British. Regular communication from London and Liverpool. Distance from London, 4700 m, Liverpool, 4625, Glasgow, 4735; Cardiff, 4520, New York, 1710, Havana, 590. British consul Pop 287,500.

**New Plymouth**, a port of the provincial district of Taranaki, on the W. coast of the North Island of New Zealand, 120 m S.W. of Auckland; anchorage in 8 to 9 fathoms a mile to a mile and a half off shore, the harbour being available only for vessels up to about 14 ft draught, imports coal and general goods, exports dairy produce, boots and shoes, joinery, leather, wool, and frozen meat, the total value amounting to over £500,000 a year. Pop 4500.

**Newport**, a town of Kentucky, United States, at the junction of the Licking and the Ohio, opposite Cincinnati, with iron and steel works, rolling mills, bolt works, foundries, &c. Pop. 28,500.

**Newport**, a town of Monmouthshire, England, on the Uxk, 21 m by rail S.W. of Monmouth; docks with depth on sill up to 35 ft. at high water of spring tides, graving dock 532 ft., with 20 ft on sill, imports iron ore and pig-iron, put-props, timber, manganese ore, &c., exports coal, manufactured iron, tin-plate, railway carriages, &c.; rolling mills and wire-drawing works. Pop 67,200.

**Newport** a town on Rhode Island, United States, on the E. side of Narragansett Bay, 60 m by rail W.S.W. of Boston, with a good harbour; manufactures cotton, brass-work, lead, and fish oil. Pop 22,000.

**Newport News**, a port of Virginia, United States, at the mouth of the James River, 60 m. S.E. of Richmond, fine harbour, depth at anchorage 9 to 10 fathoms, with 70 ft in the stream, and 26 to 29 ft alongside piers, dry dock, 610 ft. with 26 ft on the sill, and 806 ft. with 30 ft on the sill, shipbuilding, imports (total value some £900,000), jute and jute manufactures, earthenware, coco-nut and palm oil, glycerine, tins, chloride of lime, china-clay, sulphate of potash, cocoa butter, &c.; exports (total value nearly £7,000,000), flour—one-third of whole—wheat, cattle, maize, oats, coal, cotton and cotton seed products, lard, tobacco, lumber, &c. Of 2,700,000 tons, entered and cleared, nearly 2,000,000 are British. Coasting trade of over 6,000,000 tons. Regular communication from London and Liverpool. Distance from Liverpool, 3170 m, Boston, 460; New York, 260. British vice-consul. Pop 20,000.

**Newry**, a port of counties Down and Armagh, N.E. Ireland, 38 m by rail S.W. of Belfast, connected by the Newry Canal with Lough Neagh, vessels up to 12½ ft., linen yarn and cloth; tanning, rope and sail making; imports coal, iron, and general goods, exports linen, granite, and to Glasgow and Liverpool cattle and agricultural produce. Pop 12,405.

**New South Wales**—*Surface and Size*—New South Wales is one of the States of the Australian Commonwealth, in the S.E. of the continent, lying between 28° 10' and 37° 28' S and between 141° and 153° 37' E, and bounded N. by Queensland (mostly along the 29th parallel), E. by the South Pacific, S.W. by Victoria (along Murray River), and W. by South Australia (the 141st meridian). The extreme length from N to S is about 650 m, the extreme width from E to W about 800 m, and the area about 309,175 m. The rocky coast-line has a length of some 800 m. The surface consists of a coastal strip of undulating country with an average breadth of some 60 m, but widening in places to double that distance, and rising inland through the coast ranges, with a height of some 3700 ft to 6000 ft, to the Great Dividing Range—the New England and Liverpool Ranges in the N (highest point 5000 ft.).

with the Blue Mountains (4100 ft), and the Cullarín Range (3000) crossing to the Gourock (4300), Monaro (4000), and Muniong (7308) Ranges in the S, these last forming the northern end of the Australian Alps. From the tableland above which these mountains rise the country slopes westward over great flat tracts to the boundary with South Australia. These form the chief pasture lands of the state. The coastal strip has a fertile soil and is well watered, but the rivers when swollen by rains among the hills regularly overflow their banks and do mischief to the crops along their valleys. While this is so, they leave, on the other hand, the flat and bottom lands covered with a rich alluvial deposit, which will produce any kind of crop in abundance, year after year, for a long time, without either rest in fallow or manuring. The principal rivers running E are the Hawkesbury, Hunter, Shoalhaven, Clarence, Macleay, Richmond, and Manning. The rivers running W are among the great streams of the continent—the Murray, Murrumbidgee, Darling, and Lachlan, and their tributaries, having among them a length of some 4510 m, and a drainage area of 520,000 m. The climate varies of course with latitude and height, the temperature ranging from 40° to 100° Fahr (in the central plains considerably over that), and the rainfall, starting at about 50 in along the coast, becomes gradually less farther inland till, along the N W, it is under 10 in.

*Government, &c*—The Crown is represented by a Governor, and there are two houses of legislature—the Legislative Council and the Legislative Assembly. Pop 1,360,000, besides 7240 natives. Of over 470,000 workers, 147,000 are engaged in agricultural, pastoral, or mining pursuits, 140,500 in various industries, and 87,000 in commerce and trade. There are some 50,000 m of roads in the state, and Sydney is the starting point of three main lines of railway, of which the Northern passes N for 491 m to the Queensland border where it joins the Queensland system, the Western passes N W to Bourke (503 m), and the Southern (constructed to bring the Victoria wool trade to Sydney) goes south-westward 386 m to join the Victoria system at Albury. From all of these there are many branches, and the total length of lines open is 2845 m. The lines belong to the state, and there are special low rates for agricultural produce, more particularly for long distance traffic.

*Productions and Resources*—For agricultural purposes a good deal of the land is useless owing to want of water, but irrigation by supplies obtained from artesian wells is in some districts proving successful. The wonderful fertility of the bottom lands along the eastern rivers has been already referred to. Of trees, &c., the blue and red gums, iron bark, cedar,

acacias (wattle, myall wood, &c), cabbage palm, and salt bush (feeding for sheep and cattle) are of value, while fruits suited for semi-tropical and tropical climates—vines, oranges, bananas, pine-apples, figs, &c—have been introduced with success, as also farther S have those of more temperate regions. The northern district is suited for crops of maize, and sugar-cane and tobacco thrive in certain localities; along the Southern and Western Railways are orange groves (orange trees, indeed, being everywhere as common as apple-trees in Britain) and vineyards, and in the centre and S also much land suited for the ordinary grain crops, fruits, and vegetables of Great Britain, as well as for dairy farming, especially in the Illawarra district along the coast. Most important of all, however, is the sheep and cattle rearing along the Dividing Range and the western plains, the sheep numbering some 40,000,000, and the cattle 2,000,000, while the wool production is valued at over £7,500,000, and the export of frozen and preserved meat at nearly £800,000. There are also some 500,000 horses, and more than half that number of pigs. There are about 2,500,000 acres under crop, of which three-fifths are used for wheat, the maize production is over 5,000,000 bushels, wine 900,000 gallons, grapes used fresh over 4000 tons, oranges 6,500,000 dozen. The manufactures are not yet extensive, but there is output of textiles and clothing, machinery, engineering, brass, lead, and iron works, tobacco and cigars, sugar and sugar products, tallow, soap, candles, tanning, and the usual industries of large centres of population. The minerals are most important, there are large deposits of coal (area of fields about 24,000 m) all up and down the eastern quarter of the state, much of the mineral in the S E in a convenient situation for the coast. Interspersed with this at different points are deposits of oil-shale, iron, copper, and small patches bearing diamonds and opals, and others with silver. Here and there in the N and over a large area to the W and S W of the southern coal area are valuable gold-fields, and there is a detached gold-field in the extreme N W. There are large deposits of tin in the N (a smaller amount in the S E), of copper in the centre round Mouramba, and here and there in the coal area, and of silver in the W centre, round Broken Hill and from that north-eastward, and there are smaller quantities of lead, antimony, manganese, bismuth, asbestos, alum, meerschaum, and plumbago. The annual gold output varies in value between £1,000,000 and £1,800,000, that of coal is about £1,700,000.

*Trade, &c*—The total imports are valued at over £27,000,000, and the total exports at over £28,000,000, of which £19,000,000 are home produce, about half of it wool. Of the imports over £11,000,000 come from other Australian

states, £9,500,000 from the United Kingdom, £1,000,000 from other British possessions, and £2,500,000 from the United States, and of the exports over £9,000,000 go to other Australian states, £10,000,000 to the United Kingdom, £1,500,000 to other British possessions, and £4,000,000 to the United States. The chief British productions sent to New South Wales are iron wrought and unwrought, and cotton goods (both over £1,000,000); apparel and haberdashery, and woollens and worsteds (both about £800,000); spirits, steam engines, machinery, linens, beer and ale, printed books, hats, leather wrought and unwrought, paper of all sorts, painters' colours and materials, oil and floor-cloth, and earthen and china ware (all between £300,000 and £100,000). The chief articles received from New South Wales are wool (over £5,000,000), tallow and stearine, unwrought copper, fresh mutton, pig and sheet lead, silver ore, butter, leather, meat (preserved otherwise than by salting), tin, and cocoa-nut oil (all between £600,000 and £100,000). Seven-eighths of the carrying trade are British. Mails from and to London every week or oftener; parcels not over 1 lb, 1s, and for each additional pound or fraction of a pound up to 11 lbs, 6d, *via* Marseilles, Naples, or Brindisi, 1s more in each case, money orders to and from, for other postal information, *see* Australia.

**Newton Abbot**, a town of Devonshire, England, on the estuary of the Teign, 20 m by rail S of Exeter, with a little trade in china-clay, potter's clay, and tin ore. Pop 12,518.

**Newton-in-Makerfield**, a town of Lancashire, England, about midway between Liverpool and Manchester, railway centre, with print-works, paper mills, sugar-refining, iron foundries, waggon works, brick works, &c. Pop 16,699.

**Newtown**, a town of Montgomeryshire, North Wales, on the Severn, 7½ m by rail W S W of Montgomery, with manufactures of flannel, tweeds, shawls, and other woollens. Pop 6500.

**Newtownards**, a town of County Down, Ireland, one mile from the head of Strangford Lough, 14 m by rail E. of Belfast, with spinning of linen thread and hemp, weaving of fine linens (muslins, &c.), embroidery and hemstitching. Pop 9110.

**New Westminster**, a town of British Columbia, Canada, on the right bank of the Fraser River, 13 m up; one of the western termini of the Canadian Pacific Railway, 2898 m W of Montreal, and 113 m by rail and steamer from Victoria (Vancouver Island), depth of water on the bar 24 ft, and vessels of 24 ft can reach the town, extensive salmon cannery, and large saw mills which ship timber to China, South America, Africa, Europe, and Australia; imports general merchandise; ex-

ports lumber, fish, canned salmon, farm produce, fruits, furs, and hides. Pop. 6500.

**New York**, one of the north-eastern states of the United States, lying to the N. and E. of Lake Ontario, with also a coast line on Lake Erie (total length of water boundaries along the lakes about 400 m), and extending southward so as to reach the Atlantic at Long Island, where, however, though the coast is small, it is important as containing the harbour of New York City. The surface undulates from the coast to the Adirondacks (over 4200 ft), and the drainage is carried off by the Hudson, St Lawrence, Delaware, Susquehanna, Genesee, Niagara, and smaller streams. Considerable amount of forest which yields valuable lumber, magnetic iron ore, lead, copper, zinc, talc, salt, petroleum, natural gas, cement, and graphite, excellent agricultural district with vines, hops, tobacco, dairy produce, vegetables, &c, for the New York market. Pop 7,269,000.

**New York City**, the largest city of the New World, in New York State, United States, on the E side of the Hudson River, at the meeting of the North and East Rivers at Long Island Sound, about 12 m. up from the sea. The bar at Sandy Hook, 18 m distant has two channels ranging up to a depth of 34 ft at low water, and it is proposed that this should be increased. Depth at quays up to 35 ft at all states of the tide. After crossing the bar vessels pass through the Narrows to the inner harbour, between Long Island and Staten Island. Of the total imports of the United States, New York receives over 60 per cent, and of the total exports it sends out over 45 per cent, the value of the exports amounting to about £100,000,000, and of the imports to about £111,000,000. Great centre of railways and waterways, and with an enormous coasting trade. The chief imports are coffee (over £11,000,000), sugar (over £10,000,000), cotton goods (over £6,500,000), silk goods, india-rubber, and skins (all over £5,000,000), tin (pigs and bars), flax manufactures, jewellery and precious stones, woollen goods, hides, tobacco, jute (and manilla and sisal), raw silk, chemicals, fruit, iron and steel, wine, woollen goods, cocoa, copper ore and pigs, and undressed furs (all between £5,000,000 and £1,000,000), china, furs, oils, tea, aniline dyes, gloves and leather manufactures, metals, tin-plate, glass, fish, and spices (all between £1,000,000 and £500,000), and argols, artificial feathers, lead, paper manufactures, toys, fruits, platinum, plumbago, nitrate of soda, cheese, ordinary feathers, hat materials, books, cork, raw cotton, bristles, matting, wood, paint, watches, and liquorice root (all between £500,000 and £100,000). The chief exports are illuminating oil (over £7,000,000), raw cotton (over £6,000,000); copper ore and ingots, wheat, bacon and

hams, and lard and its compounds (all over £4,000,000); fresh beef, iron and steel manufactures, machinery, tobacco, agricultural implements, cattle, maize, cotton manufactures, wheat, flour, leather, lubricating oil, cotton-seed oil, paraffin, and thé oil (all between £1,000,000 and £1,000,000), hardware, fruits, scientific instruments, paper, pork, oil-cake, furs and skins, leather manufactures, meat products, oats, pipes and fittings, sewing machines, canned beef, butter, drugs, locomotives, horses, musical instruments, railway cars, flax seed, tools, and typewriters (all between £1,000,000 and £500,000), and cured beef, furniture, medicines, books and maps, carriages, cheese, clocks and watches, sulphate of copper, cycles, electric appliances, fish, grease, manufactures of india-rubber, lumber, nickel, pumps, tallow, timber, manufactures of wood, glucose, hops, milk, corn-seed oil, naphtha, sausage casings, soap, syrup, twine, manufactures of copper, fire-arms, nails, and rye (all between £500,000 and £100,000). Of 17,000,000 tons, entered and cleared, half belongs to the British Empire, about one-sixth to Germany, and one-fifteenth to the United States. Of the imports about one-sixth comes from Great Britain (which is more than holding its own), about one-twelfth from British possessions, about one-eighth from Brazil, and rather less from each of France and Germany. Of the exports over one-third goes to Great Britain, and over one-ninth to British possessions, Germany and its possessions take over one-tenth, and the Netherlands rather more than half, and France rather less than half, of this. Of over 62,000,000 bushels of grain exported, the United Kingdom takes considerably more than half, and Germany considerably over one-fifth. Of the whole export nearly half is wheat, nearly one-third maize, and over one-eighth oats. The manufactures of the city itself and the surrounding district have an annual value of about £200,000,000, the most important being clothing (ready-made clothes, hats, gloves, silk goods, &c.), textiles (carpets, rugs, cottons, felts, silks, woollens and worsteds), knitting, confectionery, jewellery, &c.), picking and preserving of meat, making of pianos, brewing, distilling, printing, &c. Time for noon at Greenwich, 74 A.M. Regular communication from London, Liverpool, Southampton, Glasgow, Tyne, Hull, Bristol, and Swansea. Distance from London, 3250 m., Liverpool, 3070, Southampton, 3050, Glasgow, 3100, Cardiff, 3050. British consul-general Pop 3,437,500.

**New Zealand.—Surface and Size.**—New Zealand is a British colony comprising the three islands known as North, South (or Middle), and Stewart, in the South Pacific, 1250 m. E.S.E. of Australia, and extending between 34° 30' and 47° 30' S—a distance of

about 1100 m.—and between 166° 35' and 178° 35' E. If the outlying islands forming part of the colony—Chatham Islands, 540 m. E., Auckland Islands, 200 m. S., Campbell Islands 460 m. S.E.; Bounty Islands, 415 m. E.S.E., Kermadecs, 600 m. N.E.; and the Cook, Savage, and Penrhyn Islands—be included, the limits will be between 33° and 53° S, and between 162° E and 173° W. As will thus be seen New Zealand is almost antipodeal to the mother country. Between the North and South Islands is Cook's Strait (16 m. at narrowest), and between the South and Stewart Island Foveaux Strait with practically the same width. The coast-line is mostly well broken, and owing to this and the length of the many islands as compared with their breadth, no place is more than 75 m. from the sea. The North Island has an extreme length of about 515 m., an extreme width of about 200 m., an area of 44,500 m., and a coast-line of 2200 m. There are many volcanic mountain ranges, running more or less parallel, throughout the island and these reach an extreme height of some 9200 ft. The drainage is carried off by the Waikato, Thames, Waioa, North, Wanganui, Hutt, their tributaries, and many smaller streams. The South Island has a length of 525 m., an extreme width of 180 m., an area, with the adjacent islets, of 58,500 m., and a coast line of 2000 m. There is a back bone of mountain running from end to end, and known in the centre, where it is highest (12,349 ft.), as the Southern Alps, and in the N and S are other parallel ranges with heights of from 6000 to over 9000 ft. From the Southern Alps south-eastward stretch out the great Canterbury Plains. The chief rivers are the Molyneux, the Waimakariri, the Mataura, the Waitaki, the Teremakau, the Hollyford, the Taieri, and the Rakau. The small Stewart Island has a length of about 40 m., a width of 20 m., an area of 665 m., and a coast-line of about 130 m. It is hilly, reaching an extreme height of 3200 ft. Slight earthquakes occur from time to time, and within the last 20 years there have been one or two severe ones, and several violent volcanic outbursts. The climate varies considerably with latitude and height, but, speaking generally, the mean temperature of the North Island is the same as that of the S. of Europe, while the mean of the South Island is a little above that of the S. of England, January and February being the warmest months, and July and August the coldest. Snow never lies on the low ground of the North Island, and but seldom in the South Island, and the frosts are generally slight—in the North, very much so. The snow-line is about 7500 ft. The prevailing winds are N.W. and S.W., and the rainfall is greater on the W. than on the E. coast, the mean amount varying in different places from 30 to 100 in. or more.

*Government*—The affairs of the colony are managed by a Governor representing the Crown, and a General Assembly consisting of a Legislative Council and a House of Representatives. There is "one man one vote," and failure to exercise the franchise involves temporary removal from the roll. In matters such as these, as well as in old-age pensions, compulsory arbitration in trade disputes, &c, the colony may be described as making experiments in legislation. Including all the islands, the total area of the colony is 104,471 m., the total pop 851,000, inclusive of 43,000 Maoris, and nearly 3000 Chinese. North Island, 390,600; South Island, 381,700; Stewart Island, 272; Chatham Island, 207, and Kermadacs, 8. Of some 380,000 workers, over 106,000 are engaged in agricultural, pastoral, or mining, pursuits, 82,000 in industries, and 50,500 in commerce.

*Communications*—There are some 30,000 m. of good roads, and a total railway mileage of 2300 almost all belonging to the state. The principal districts served by them are the centre and N of Auckland, and Taranaki, Wellington, and Hawke's Bay, in the North Island, with a total mileage of 829 m. In the South Island the total is 1383 m, the main system beginning at Culverden 69 m N of Christchurch, and passing southward by Christchurch and on through the Canterbury District along the coast to Dunedin 230 m., and thence all over the S E corner of Otago by various branches. In the N. and N E of the Island there are four short lines, at Picton in Marlborough, Nelson and Westport in Nelson, and round Greytown in Westland. About 88 m belong to private trading companies.

*Productions and Resources*—Of indigenous products may be mentioned the wild flax (phormium), which is noted for the toughness of its fibre (export valued at £330,000), and the totara and raupo, which will probably be found suitable for paper-making, and many varieties of pine and beech as well as woods (with as yet obscure native names) of beautiful grain and colour which fit them for furniture woods and for ornamental purposes. The kauri pine is valuable not only for its timber, but also for its gum (used for making fine varnishes), the export of which is valued at over £600,000. Efforts are being made to introduce gums from Australia, and wattles from Tasmania. The forest area is estimated at 18,000,000 acres, and the timber export is valued at nearly £300,000. The Canterbury Plains and other grazing lands of the country are covered with fine natural grass, and many of the more valuable trees and plants of Europe and America have been introduced with marked success—oranges, lemons, citrons, peaches, apricots, figs, melons, grapes, apples, pears, and indeed all the fruits of the temperate zone abound. The oranges and

lemons of Auckland are excellent, and the success of the olive will probably lead to a large trade in olive-oil. Linseed also does well. Of the total area of nearly 67,000,000 acres it is estimated that 28,000,000 acres are fitted for agriculture, and over 27,000,000 acres for grazing, but of the latter a large part is still uncleared, and the total grazing area available is probably about 12,000,000 acres, while only about 1,000,000 are actually under some crop apart from grass. Of this nearly half is under oats, and about a fifth under wheat. The live stock consists of 19,500,000 sheep, 1,200,000 cattle, 260,000 horses, and 250,000 pigs, and it is in the sheep and cattle—especially the former—that the great wealth of the country lies, the export of wool being valued at nearly £4,000,000, the frozen meat export at some £3,000,000, butter at over £900,000, cheese at over £300,000, and efforts are being made to establish the manufacture of condensed milk. The coalfields of the colony are estimated to extend over an area of more than 800 m, and the annual output has reached over 1,000,000 tons. Gold is found in Auckland, Marlborough, Nelson, Westland, Canterbury, and Otago, the annual output being valued at over £1,500,000; antimony, copper, silver, manganese, sulphur, and shale are also worked, and efforts are being made to develop cinnabar, opals, and petroleum. Tin and wolfram exist in Stewart Island. In Auckland the digging of kauri gum which has exuded from the kauri pine is an important industry, the export being valued at over £600,000. The other industries of moment are connected with flax mills, saw mills, grain mills; meat-preserving, freezing, and boiling down, works, and the making of joinery, leather, and harness, and woollen-weaving, &c.

*Trade*—The total imports are valued at over £11,000,000, and the total exports at £13,600,000, of which over £13,200,000 are for the products of the colony. Of the imports £6,000,000 come from the United Kingdom, over £1,300,000 from Australia, and over £1,000,000 from the United States, and of the exports over £10,500,000 go to the United Kingdom, and nearly £1,900,000 to Australia. The leading imports are textiles and clothing, and iron and steel goods and machinery (both over £2,000,000), sugar, tea, tobacco, and general goods; and the chief exports, besides those already mentioned, are grain, pulse, and flour (over £1,000,000), hides, skins, and leather; and tallow. The chief articles received from Great Britain are iron and steel, cottons, apparel and haberdashery, woollens and worsteds, engines and machinery, leather wrought and unwrought, chemicals, spirits, and paper (all between £800,000 and £100,000); and the chief articles sent to Great Britain are wool (£3,878,000), fresh mutton (£2,919,000), butter (£820,000); wheat, tallow and steam, fresh

beef, undressed sheep skins, kauri gum, cheese, dead rabbits, hemp, and leather (all between £500,000 and £100,000) Of a total of over 1,500,000 tons, entered and cleared, some 50 per cent. are British Vessels belonging to the colony have a registered tonnage of over 100,000, shipping in the foreign trade, entered and cleared, over 2,000,000 tons, and in the coasting trade over 15,500,000 tons Mails to and from London every week, postage of letters, 1d per half-oz; postcards, 1d, parcels, under 3 lbs, 1s; between 3 and 7, 2s; between 7 and 11, 3s.; money orders to and from, telegrams, *via* Turkey, 3s 1d a word, other routes, 3s. 4d.

Niagara, a river 36 m long, flowing from Lake Erie to Lake Ontario, between which there is a difference of level of 326 ft, of which some 50 ft. are in the rapids above the great falls, 158 ft on the Canadian side and 162 on the American side of the great falls themselves, and about 110 ft. in the 7 m of rapids below the falls The Canadian (Horseshoe) Fall has a width of over 2600 ft, and the American Fall of over 1000 ft The depth of water along the top of the falls varies from 4 to 20 ft, the smaller number being the more common Since 1895 part of the water-power has been utilised for lighting and manufacturing purposes A tunnel leads to enormous turbines which generate electricity, and this is transmitted to various districts in the neighbourhood

Nias, an island belonging to Holland off the W. coast of Sumatra, mountainous, reaching a height of nearly 2000 ft., pepper, rice, coconuts, bananas, tobacco, and sugar-cane Area, 2100 m. Pop 200,000

Nicaragua, a republic of Central America, lying between 11° and 15° N, and between 83° and 87½° W, and bounded N W by Honduras, E. by the Caribbean Sea, S by Costa Rica, and S W by the Pacific. The length of side along the Caribbean Sea is about 300 m, along the Pacific about 185 m, and the area is 50,000 m The Cordillera, with an elevation of 800 to 4000 ft. (and with, to the westward, volcanic cones rising to heights of from 4000 to nearly 7000 ft.) runs along the S W side at a distance of from 15 to 30 m from the coast. Between the mountains and the sea is a depression containing Lake Managua (35 m by 20 m, and 5 fathoms deep), and Lake Nicaragua (115 m by 45 m, and 24 fathoms deep) To the E. the surface between the base of the hills and the sea forms an extensive plain The drainage is carried off by the Coco, the Sisin, the Grande, the San Juan (all flowing eastward), and smaller streams The San Juan which carries off the surplus waters of Lake Nicaragua, forms the boundary with Costa Rica on the S E. There are occasional earthquake shocks, and at intervals of many years violent volcanic outbursts. The climate varies, of course, with height, the coast regions being hotter and

damp The temperature ranges between 70° and 90° Fahr, and the trade winds bring a considerable amount of moisture between May and December—most between May and August There are many minerals, but only gold and silver are worked The forests contain mahogany, rosewood, cedar, and other furniture and fancy woods, logwood, fustic, and other dye-woods, sandal-wood, medicinal trees, gums, and rubber trees, but the latter have shown signs of exhaustion, and collection of rubber is, meanwhile, prohibited On the higher grounds there are wide-stretching savannahs with excellent pasture, and the country has consequently a large number of cattle (about 400,000) and some export of live stock and hides There is culture of coffee, sugar-cane, cacao, bananas, and rubber, and the cultivated area (not as yet large) is increasing The manufactures are of merely local importance The total import is valued at £700,000, the chief articles being cottons, flour, woollens, hardware, sacks, and provisions and general goods. Of the whole some £140,000 goes from Great Britain, mostly cottons, with much smaller amounts of woollens, iron, and sacks The total export is valued at about £800,000, the leading articles being coffee (half), gold, silver, rubber, mahogany (and walnut and cedar), cattle, hides, cotton, and dye-woods Of the whole some £70,000 comes to Great Britain (but the amount is very variable), almost entirely coffee and mahogany. Something might be done in the supply of hardware, machinery, fencing wire, boots and shoes, hats, drugs, underwear, enamelled ware, china and glass ware, paper, and electrical fittings, nearly all of which are sent from the United States, Germany, or France. The drawback to several of these is the price of the British article owing to its superior quality Travellers are needed There are about 180 m of railway mostly belonging to the state, and some lake and river communication; good roads are few and short. The metric system is in use, and money, &c. are as in Honduras, about 12 silver pesos or dollars, the unit of account, being=20s. There are mails from and to London every month, letters, 2½d per half-oz, postcards, 1d, telegrams, 4s 2d a word The government is carried on by a president elected for four years, and a congress of a single legislative body of 40 members elected by universal suffrage for two years There are British consuls at Granada, Greytown, and Managua (the capital), a vice-consul at Bluefields, and a consular agent at Corinto. Pop 500,000, of whom 40,000 are uncivilised Indians, and only about 1500 Europeans or of European descent.

Nicaragua Ship Canal, a proposed waterway between the Atlantic and the Pacific through the S end of the state just described From Greytown there would be some 37 m of canal to the San Juan River, a little below the

junction of the San Carlos, after which the course of the river itself would be canalised to Lake Nicaragua, along which the channel would pass, and from the W. side of which there would be canal for about 26 m. The total length would be slightly over 163½ m, of which nearly 7½ would be canal and entrances, 70½ along Lake Nicaragua, and about 39 along the canalised San Juan. Lake Nicaragua (110 ft. above the sea) would form the summit level, and this would be reached by three lifts on each side. For a minimum depth of 30 ft the estimated cost of construction is about £35,000,000, and of annual upkeep nearly £700,000. The making of this canal would create an entirely new set of trade routes between western Europe and the East, and also between the E. coast of North America, and the W. coasts of both North and South America. A large ship would take about 33 hours to pass through the canal, and the estimated gains as compared with the Panama route are between the Atlantic and Pacific ports of North America one day, and the same between the Atlantic ports and the East, while from the Gulf of Mexico ports the gain would be nearly two days. By this route the distance from Liverpool to San Francisco would be 7651 m., Callao, 6481; Valparaiso, 7708; Yokohama (via San Francisco), 12,167, Shanghai (via Yokohama), 13,237; Wellington, 11,261; Sydney (via Wellington), 12,174. corresponding distances from Antwerp, 7889, 6719; 7916; 12,425, 13,475; 11,500; 12,412. Bordeaux, 7639, 6469, 7636, 12,175, 13,225; 11,250; 12,162 New York, 4921; 3751; 4928, 9457; 10,507; 8531, 9444. New Orleans, 4118; 2948; 4175, 8654, 9704; 7728; 8641.

Nice, a port of the department of the Alpes-Maritimes, S E France, 140 m E by N. of Marseilles and 110 S W. of Genoa, harbour takes vessels up to 19 ft draught; manufactures of perfumery, pottery, carbide of calcium, and carved olive wood; flower and fruit growing. Imports (total average value over £1,000,000), wine, olive-oil, wheat, coal, charcoal, machinery, timber, and flour; exports (total average value £80,000), olive-oil, oranges, lemons, olives, preserved fruit, and perfumery. Of some 500,000 tons, entered and cleared, about one-seventh is British. If lamps, paper, and embossed cards can be sent by American firms at a profit, there seems to be no reason why they could not be sent by British merchants with the same result, seeing there would be less freight to pay. Letters, 1 day 2 hours; parcels, 3 days. British consul. Pop 105,500.

Nicobar Islands, a group of some 20 islands (12 inhabited) on the E side of the Indian Ocean, to the S of the Andamans. The northern portion is low or undulating, with cocoa-nut trees, and the southern hilly, rising to 2000 ft and covered with forests; climate unhealthy, exports cocoa-nuts, trepanz. and

edible birds nests. Area about 500 m. Pop estimated at 6500.

Niemen. See Memel.

Nièvre, a department of centre France; rugged in the E. (Morvan Hills), reaching a height of about 2800 ft, W. low and less broken, reaching a height of about 1100 ft; drainage carried off by the Allier, Loire, and Yonne (Seine basin); large forest area, and rearing of cattle and sheep; coal in S E and manufacture of iron and steel. Area, 2632 m. Pop 324,000.

Niger, a great river of West Africa, rising in the plateau to the N E of Sierra Leone and Liberia, and flowing first north-eastward and then south-eastward and southward until it enters the Gulf of Guinea, between the Bight of Benin and the Bight of Biafra, after a total course of some 2600 m. About 250 m from the mouth it receives from the E the great tributary of the Benue, and the total area of the basin, including that of this tributary, is over 1,000,000 m. The lower portion of its course, and almost the whole of the Benue, are in the British territory of Nigeria. The upper part of its course is in the French sphere of influence. The upper Niger is navigable for about 500 m S W. of Timbuctoo, and for about 150 E of that place, and the lower part of the river is navigable for about 400 m, from Rabba to the mouth.

Nigeria, a British protectorate in West Africa, on the Gulf of Guinea, between the German Cameroons on the E and the strip of the French sphere of influence at Dahomey on the W, and extending inland at its extreme northern point to the parallel of 14° N. It comprises the Lagos Protectorate and Northern and Southern Nigeria, of which the first has been already noticed. Southern Nigeria, which extends, to the E of Lagos, about 106 m along the coast, resembles that colony in physical features and climate. The productions are the oil-palm, rubber trees and vines, cotton, kola-nuts, ground-nuts, copal and other gums, silk cotton trees, shea butter, castor-oil plants, ivory, ebony, &c., and cacao and coffee have been introduced. The rubber production is, wherever possible, under careful control. The exports (total value over £1,250,000—two-thirds to the United Kingdom, and the bulk of the remainder to Germany, which takes palm kernels and palm-oil, and to France, which takes palm-oil) are chiefly palm-oil, palm kernels, rubber, ivory, and timber (mahogany). The imports have a total value of over £1,300,000—five-sixths from the United Kingdom and the bulk of the remainder about equally divided between Germany and Holland (mostly gin, Geneva spirits, and rum, and in the case of Germany also £10,000 of hardware). The chief other articles are cotton goods, coopers' stores, building materials, tobacco

(unmanufactured), hardware and cutlery, salt, wearing apparel, silk, coal, bags and sacks, beads, rice, and provisions and general goods. The export of timber has begun. Of nearly 2,000,000 tons, entered and cleared, over 1,900,000 are British. The imports and exports, as in Lagos, include a certain amount of goods from and to Northern Nigeria.

Northern Nigeria, extending inland behind the other two districts, is about thrice as large as both of these together. The country away from the Niger valley seems fairly healthy. There are undeveloped deposits of silver, tin, antimony, and lead. The chief products are shea butter, palm oil and kernels, rubber, hides, ground-nuts, ivory, chillies, cotton, indigo, gums, and copaba, and there is promise of a transit trade of fine leather from the interior. The chief imports are cottons and woollens, silks, hardware, earthenware, salt, powder, &c. Regular communication with Liverpool every fortnight by steamers carrying mails. Letters, 1d per half-oz; postcards, 1d, parcels under 3 lbs., 1s, between 3 and 7, 2s, between 7 and 11, 3s, money orders to and from Southern Nigeria, telegrams, 6s 5d to 6s 10d a word. The area of Northern Nigeria is about 300,000 m<sup>2</sup>, of the whole of Nigeria about 400,000 m<sup>2</sup>, and the total population has been estimated at 30,000,000, but the figure is untrustworthy.

Nugata, a port of Japan on the W. coast of Honshu, 16 m N N W. of Tokyo, in a tea district, petroleum springs in neighbourhood, manufacture of lacquer ware, harbour open to foreign trade, but shallow bar confines the traffic to junks. Pop 53,500.

Nijni Novgorod, a town in a province of the same name, Russia, at the junction of the Oka and Volga, 275 m by rail E. of Moscow. Great centre of trade for interchange of goods between Asiatic and European Russia and Caucasus, ordinary manufactures coming from the basin of the Oka, metal manufactures from that of the Kama, grain, salt, raw cotton, and oil from that of the Volga, and tea and other goods from Asiatic Siberia. Great fair in the months of August and September, when goods of the different kinds mentioned above are said to be dealt in to the value of over £20,000,000, while transactions in goods not actually brought to the place increase the total value of the business transacted to about £40,000,000. At this time the ordinary pop of the place increases for the time being fourfold. The province hilly except along the Volga, where there are large tracts of forest land interspersed with marshes and lakes. Manufactures of woollens, cutlery, leather, wire, steel, copper, flour, naphtha. Great river trade. Area of province, 19,797 m<sup>2</sup>. Pop 1,600,500; pop of town, 95,500.

Nijni Tagilsk, a town of the province of

Perm, Russia, on the Ural, 150 m by rail E of Perm, with platinum, copper, and iron works. Pop 6000.

Nikolaiev, a town of South Russia, at the junction of the Ingul and Bug, 42 m up from the sea and 41 m N W. of Kherson, depth on bar and in channel 25 ft, 22 ft, at quays; channel kept open in winter by ice-breakers; great storehouses for grain. Imports coal, iron, steel, machinery, and general goods; exports wheat, rye, barley, oats, linseed, rape-seed, buckwheat, oil-cake, sugar, and manganese ore, immense ship-building yards connected with the Government Naval Station; iron and steel works, saw-mills, flour-mills. Of over 900,000 tons, entered and cleared, 48 per cent are British. British vice-consul. Pop 92,100.

Nile, a great river of Africa, the largest in the old world, carrying off the surplus waters of the great equatorial lakes—Victoria, Albert, and Albert Edward, Nyanza—and with a northerly course thence for some 3600 m through the Anglo-Egyptian Soudan and Egypt to the S E corner of the Mediterranean. The only tributary it receives from the W is the Bahr-el-Ghazal, from the E come the Sobat, Blue Nile, and Atbara; the rest of the course is through a desert country which has no surplus water. Indeed, vegetable growth along the whole valley is entirely dependent on irrigation from the river, and on the regular flooding (due to the equatorial rains affecting the main stream—the White Nile—and the rains in Abyssinia affecting the Blue Nile and the Atbara) which takes place between the end of June and October every year, when the river overflows its banks and spreads its fertilising waters, and the alluvium they bear, over a considerable tract on both sides. The real rise begins about the middle of July, is at its greatest height about the end of September, and falls off rapidly after the middle of October, the river being at its lowest again by April. The rise varies of course with the nature of the country at each particular place, but at Thebes it is as much as 36 ft, and at Cairo 25 ft. The flood season is a time of great anxiety to all concerned, as a good Nile means a prosperous year, while a low Nile means famine and suffering. Since the British occupation of Egypt much has been done to improve the irrigation system, and in 1898–1902 a great barrage was erected at Assuan (about 350 m up from Cairo), a dam at Assiout at a cost of nearly £5,000,000, and a dam at Zifta, midway between Cairo and the sea. The first will store up the water after the flood has passed, and increase the supply in summer, so that the basin lands of Middle Egypt will in future produce two crops a year, as similar tracts do in Lower Egypt, while pumping stations will increase the area under sugarcane, and a considerable area of waste land

in the Fayoum province, and in the delta, will be brought under cultivation. The dam at Assiout (half-way between Assouan and Cairo) will raise the level of the river, enabling an extra supply of water to be pressed into the Ibrahimieh Canal—the main source of supply for the converted basin lands—and by the Yusufi Canal more water will be given to the Fayoum province. These dams will provide for irrigation an extra 1000 million cubic metres of supply, but it is calculated that for Egypt and the Anglo Egyptian Soudan other 1000 or more million cubic metres could be usefully employed, and it is proposed to obtain still further increase by constructing a reservoir at Lake Tsana in Abyssinia, by utilising the Upper Nile water at present wasted in swamps, or by constructing a reservoir at Albert Nyanza to supply the wants of Egypt, and the portions of the Soudan N. of Khartoum. The Assouan dam across the rapids of the First Cataract has a length of  $1\frac{1}{2}$  m., is 80 ft. thick at base, 66 at top, and rises 90 ft. above low Nile, with a difference in the water level above and below of 67 ft. There are 180 openings,  $11\frac{1}{2}$  to 23 ft. high and  $6\frac{1}{2}$  ft. wide, for controlling the flow. It holds 1000 million tons of water, and the dammed up water extends for 143 m with an average width of above 500 yards. Navigation is provided for by locks. The Assiout dam is over half a mile long, with 111 arched openings  $16\frac{1}{2}$  ft. wide, and closed by steel sluices 16 ft. high. The Zifta barrage provides irrigation for the northern part of the delta, and is 408 yds wide, with 50 arches  $16\frac{1}{2}$  ft. wide, and a lock 184 ft. long and 40 wide. Most of the other barrages of Middle and Lower Egypt have practically also been remodelled. Of the whole length of the river 3000 m are navigable, but the navigation is interrupted at various points by rapids known as cataracts, of which the first is above Assouan, and between that point and Khartoum there are other five, the greatest being the second of the six, at Wady Halfa. Area of basin over 1,600,000 m.

**Nimeguen**, a town of Guelderland, Holland, on the left bank of the Waal, 73 m by rail E of Rotterdam, with manufactures of tobacco, metal work, leather, and Prussian blue. Pop. 44,000.

**Nîmes**, a town of the department of Gard, France, 31 m by rail NE of Montpellier, trade in wine and brandy; manufactures of carpets and other woollen goods, silks, cottons, and boots and shoes. Pop. 81,000.

**Ningpo**, a treaty port of the province of Chekiang, SE China, on the Ningpo River, 100 m S of Shanghai, manufactures of carpets, silks, cottons, straw hats, and salt; important fisheries (cuttle-fish), total trade valued at some £4,000,000, but suffers from the nearness of the place to Shanghai, imports

opium, cotton and woollen manufactures and cotton yarn, tin, iron, petroleum, sugar, tobacco, wood-oil, and wax, &c., exports tea, raw cotton, and cuttlefish, vessels of 17 ft can reach the town at half-tide. Of nearly 1,000,000 tons, entered and cleared, some 45 per cent. are British. British consul. Pop. estimated at 255,000.

**Niort**, a town of the department of Deux-Sèvres, on the Sèvre, 43 m by rail NE of La Rochelle, important railway centre, with tanning, and the manufacture of gloves and blouses, nurseries and market gardens. Pop. 21,000.

**Nishapur**, a town of Persia, 55 m. W of Meshed, with well-known turquoise mines. Pop. 12,000.

**Nivelles**, a town of Brabant, Belgium, on the Thine, 19 m. by rail S of Brussels, with manufactures of railway waggons, carriages, &c., cotton, paper, and lace. Pop. 12,000.

**Nord**, a department of extreme N France, along the Belgian frontier, and with a sea boundary of some 20 m along the English Channel; northern part low and flat, rising nowhere over 540 ft., and having along the coast a rich grazing land protected by dykes, the southern portion is part of the plateau of the Ardennes rising to a little over 870 ft.; drained by the Scheldt, Sambre, Oise, and their tributaries, traversed by the Canal St Quentin connecting the Scheldt, Seine, Loire, and Rhone, northern part very densely peopled, forests in the SE, sugar-beet, flax, hops, colza, &c.; extensive manufactures of linen, cotton, cambric, lace, jute, hemp, woollens, and sugar, large deposits of coal and iron, and great manufactures of iron and steel, and of iron and steel goods. Area, 2193 m. Pop. 1,867,000.

**Nordhausen**, a town of the province of Saxony, Prussia, on the Zorge, 48 m. by rail NNW of Erfurt, with manufactures of brandy, tobacco, sugar, chemicals, cottons, linens, &c. Pop. 28,500.

**Nore**, The, a sandbank in the Thames, 4 m NE. of Sheerness and 47 m below London. The name is also applied to the estuary in the neighbourhood of the sandbank where there is good anchorage.

**Norfolk**, a county of England, on the E coast, S. of the Wash, with a coast line of 90 m along the North Sea, flat along the coast except at Cromer and Hunstanton, and undulates inland, but nowhere reaches any great height above sea-level, drained by the Ouse, Bure, Yare, and Waveney, which are navigable and provide means of communication between the different districts, brick-clay, agriculture, pasture, and rearing of cattle, turkeys, and geese, market gardens and orchards, fisheries along the coast. Area, 1,308,440 acres. Pop. 460,040.

Norfolk, a port of Virginia, United States, on the Elizabeth River 8 m up from Hampton Roads, 33 m. from the sea, and 80 m S.E. of Richmond; important railway and canal centre, channel has a depth of 28 ft. of water at ordinary tides, imports (total value £90,000), nitrate of soda, seeds, muriate of potash, sulphate of ammonia, sulphate of potash, bananas, &c., exports (total value over £2,000,000), flour, maize, coal, cotton and cotton-seed products, timber and lumber, &c., wheat, tobacco, linseed cake, grease, oil, cattle and sheep, &c. Of 3,300,000 tons, entered and cleared, 2,300,000 are British. British vice-consul Pop 47,000

Norfolk Island, the chief of a small group of islands in the Pacific Ocean, 400 m N.N.W. of New Zealand, and 900 E.N.E. of Sydney, about midway between New Zealand and New Caledonia, 6 m long, and a little over 2 wide, the group having an area of  $13\frac{1}{2}$  m.; coast precipitous, and island rises to an extreme height of over 1000 ft.; Norfolk Island pine grows to a height of 200 ft. Pop 870

Normanby, a town in the North Riding of Yorkshire, England,  $3\frac{1}{2}$  m S.E. of Middlesbrough, centre of important iron district, with iron and glass works. Pop 11,182.

Normanton, a town of the West Riding of Yorkshire, England, 10 m. by rail S.E. of Leeds, important railway centre, with deposits of coal and iron. Pop 12,353

Norristown, a town of Pennsylvania, United States, on the Schuylkill, 17 m. by rail N.W. of Philadelphia, iron centre, with weaving of cottons and woollens, rolling-mills, foundries, flour mills, and glass works. Pop 22,500

Norrköping, a port of Sweden at the head of the Bravik, 113 m by rail S.W. of Stockholm, with weaving of woollens and cottons, making of cotton yarn, and manufactures of flour, oil, sugar, and paper, anchorage 5 or 6 m. from shore up to 30 ft, vessels of 16 ft. draught can get close inshore, imports coal, cottons, woollens, machinery, manure, and general goods, exports timber, wood-pulp, matches, iron, paper, &c. Regular communication from Hull and Manchester. Distance from London, 1090 m., Hull, 995; Tyne, 960; Leith, 990. British vice-consul. Pop 41,000

North Adams, a town of Massachusetts, on the Hoosac River, 143 m by rail N.W. of Boston, with manufactures of woollens and cottons and boots and shoes, and print-works. Pop 24,500

North America, the northern continent of the great American system, lies roughly between  $15^{\circ}$  and  $85^{\circ}$  N (including the Arctic Islands— $71^{\circ}$   $23'$  for mainland), and between  $55^{\circ}$  and  $170^{\circ}$  W, and is bounded N by the Arctic Ocean; N.E. by Smith Sound, Baffin Bay, and Davis Strait, S.E. by the Atlantic Ocean, S by the Caribbean Sea, Gulf of

Mexico, and Central America; and W. and S.W. by Behring Strait, Behring Sea, and the Pacific Ocean. The extreme length is about 4500 m, the greatest width about 3300 m, the coast-line (of the mainland only) about 28,000 m, and the area about 9,000,000 m. The physical features and other aspects of the northern half are described under Alaska and Canada, and of the southern half under the United States and Mexico.

Northampton, one of the midland counties of England, with a chief town of the same name, surface undulating, except in the N.E. where it forms part of the Bedford Level in the Fens, rising to heights of from 700 to 800 ft.; drained by Avon, Nen, Welland, Cherwell, and Ouse; dairy-farming and horse-rearing, large deposits of iron, blast-furnaces, and important manufactures of boots and shoes. Area, 641,992 acres. Pop 338,064. The county town, on the left bank of the navigable Nen, 66 m by rail N.N.W. of London, has important manufacture (the most so in England) of boots and shoes, and leather-dressing, and lace making. Pop 87,021

Northampton, a town of Massachusetts, United States, near the Connecticut River, 103 m. by rail W. of Boston, with considerable manufactures of paper, silks, cottons, woollens, sewing-machines, and cutlery. Pop 19,000

North Cape, the reputed most northerly point of the Continent of Europe, on the Island of Mageoe, Norway. The headland that stretches farthest N. is said to be in reality one a little more to the W. known as Knivskjærodden

North Carolina. See Carolina

North Sea, a branch of the Atlantic Ocean, penetrating the N.W. of Europe, with the British Isles on the W, and Norway, Denmark, Germany, Holland, Belgium, and France, on the E and S.E. At the S. end it communicates with the Atlantic by the Strait of Dover, and the English Channel, at the N it communicates with it by the various passages among the Orkney and Shetland Islands, and, due N, it opens so widely towards the Arctic Ocean, that it is sometimes considered as a southern extension of that great body of water. On the W. it communicates with the Baltic by means of the Skager Rack and the Cattgat. Its length from N to S is 600 m, its extreme width about 350, and its greatest depth, near the S end of Norway, some 440 fathoms. It receives all the larger and more important rivers of Great Britain—Thames, Wash River, Humber Rivers, Tyne, Tweed, Forth, Tay, Moray Firth Rivers—as well as the Scheldt, Rhine, Elbe, Weser, and other large Continental rivers, and this renders it less salt than it would otherwise be. Apart from the deep portion along the Norwegian coast the sea is shallow, the depth varying from 10 to 50

fathoms, and the numerous banks that form the bottom (Dogger Bank, Great Fisher Bank, &c) provide excellent fishing grounds, which are largely taken advantage of by vessels from all the nations along the shores. The fish include cod, ling, herring, haddock, whiting, halibut, sole, lobster, crabs, shrimps, oysters, mussels, whelks, &c. The tidal motion depends mainly on the great wave that sweeps in from the N end by the Shetland and Orkney Islands, and which, a little distance to the N of the Strait of Dover, meets another branch of the tidal wave from the English Channel, with the result it is said that midway between the British and the Dutch coasts there is almost no tidal rise or fall at all. Area about 160,000 m.

Northumberland, a county of N.E. England, with a coast line of over 100 m along the North Sea. The coast is flat, inland the surface is undulating, rising to heights along the N W of the county of over 2600 ft, drained by the Tyne, the Wansbeck, the Coquet, the Aln, the Till, and the Tweed; pasture-land in the W with rearing of sheep and cattle, salmon-fishing in Tyne and Tweed; enormous deposits of coal in the S E., with lead in the S W, zinc, alumina, and barytes; blast-furnaces, iron works, iron and steel goods, chemicals, glass, &c. Area, 1,289,756 acres Pop 602,859

North West Provinces, or United Provinces of Agra and Oudh, an administrative district of India, in the upper basin of the Ganges and Jumna, sloping upwards towards the Himalayas, with large wheat crop, and valuable production of timber, gums, resins, rice, maize, millet, and other grains, indigo, cotton, sugar, oil-seeds, opium, and tobacco, good railway communication, manufactures cotton, metal ware, leather, inland-work, carpets, silk, calico, paper, &c. The total area is over 71,500,000 acres, of which over 8½ millions are under timber, and about 24½ millions under crop—of the area under crop about 4½ millions are under wheat, the same amount under rice, 15 millions under other grains, over one million under sugar-cane, about one million under cotton, about half a million under oil-seeds, and over 200,000 under indigo. Area of British portion, 107,164 m, of native states, 5079 m. Pop 48,500,000, including 802,000 in native states

North-West Territories, the name roughly given to the whole portion of the Dominion of Canada N and W of Quebec, Ontario, and Manitoba, with the exception of British Columbia. It is now broken up into the districts of Assiniboia, Saskatchewan, Alberta, Athabasca, Yukon, Mackenzie, and Keewatin

Northwich, a town of Cheshire, England, at the junction of the Weaver and the Dane, 18 m by rail N E of Chester, with enormous salt and chemical works, partly supplied by

brine springs and partly by deposits of rock salt, alkali being made direct from the brine Pop 17,609

Norwalk, a town of Connecticut, United States, at the mouth of the Norwalk River, on Long Island Sound, 41 m. by rail N E of New York, good harbour with ship-yards, iron foundries, making of carriages and locks, iron works and foundries, manufacture of woollens, straw and felt hats, and boots and shoes, extensive oyster fishery and oyster canning Pop 13,000

Norway—*Situation and Size*—Norway is a kingdom in the extreme N.W. of Europe, lying between 58° and 71° 11' N, and between 5° and 31° E; and bounded N. by the Arctic Ocean, N E by Russian Lapland and Sweden, S by the North Sea, Skager Rack, and Cattegat; and N W by the Arctic and Atlantic Oceans. It has an extreme length of about 1150 m, a width varying from 20 to 260 m, and an area of 124,445 m. The sea-board is fringed by chains of islands which render it, in many cases, dangerous of access, though they give continuous lines of smooth-water channel inside. It is also everywhere indented by the long, narrow, winding inlets, often with sides rising sheer from the sea, known as fjords, and this broken character gives the country a long coast-line of over 3000 m, while the deep water fjords furnish many convenient harbours. The islands contain some 7 per cent. of the total area, the chief being Kvalø, Tromsø, the Lofotens, and the Vigotens. The chief fjords are the Varanger, Alten, Trondhjem (80 m), Molde, Sogne (106), Hardanger (66), Stavanger (50), and Christiania (90), which vary in depth from 220 to over 660 fathoms. Excepting in the S and S E the coast rises steeply from the sea, and the interior plateau slopes up to the mountains that form the boundary all along the S E—the Kjølen in the N with a mean height of from 4000 to 6000 ft, and the lower but more widely spread Dovrefeld in the S, with a mean height of from 2000 to 4000 ft. A number of peaks reach a height of over 7000 ft, and the highest points about 8400. There are a large number of long, narrow lakes, lying in ice-scooped hollows, and, as might be inferred from the surface features, a large number of short, rapid rivers. The longest are the Glommen (350 m), flowing to Christiania Fjord, in the S, and the Tanna (175), in the N., going to the Arctic Ocean. The climate of the coast is less severe than might be expected, as the warm Gulf Stream washes the whole of the N W, and the hills keep off, to a considerable extent, the cold N E winds, but on the other hand the conditions in the interior are pretty severe, and as the openings of the fjords allow the damp winds of the Atlantic to reach the plateau, the snowfall there is greater than it would otherwise be. The rainfall on the coast varies from 40 to 75 in., and in the interior